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ORIGINAL ARTICLES.

REMARKS BEFORE THE HAHNEMANNIAN SOCIETY OF THE N. Y. HOM. MED. COLLEGE, AT ITS COMMENCEMENT EXERCISES.

BY PROF. WM. TOD. HELMUTH.

GENTLEMEN:—It gives me a great deal of pleasure to appear before you to-night, because with many of you it is the last time that we shall be brought together in the relationship of professor and student. To-morrow at this hour the condition will be changed. Those who have been notified of their successful examination will be made Doctors of Medicine. You are not *now*, even having gone through your studies and having answered satisfactorily the interrogatories propounded to you, Doctors of Medicine, These preliminaries have made you worthy of the Doctorate. The conferment upon you of your title by the proper authority at the proper time, and in the proper place, gives you a position among men—you are made physicians. This, then, will be my last opportunity of addressing you; this will be my last attack upon your auditories in the capacity of professor. In this connection, allow me to thank you for your attendance upon, and attention to, those lectures which it has been my pleasure to deliver to you. Not *once* during the course have I seen an error in deportment in my room, but once or twice have I seen a nodding head, and the satisfactory answers to the many questions propounded during the course have given me both encouragement and pleasure. Here now we pause. You have arrived at an important period in your lives. A portion of the journey through life has been accomplished, and a somewhat commanding eminence on the road that leads to the ultimatum of your desires has been gained; the mind has been stimulated with the expectation of the prospect it will enjoy, and now curiosity operates with redoubled force and excites new desires to contemplate those objects which are still beyond the view. Here, then, would it not be well to pause and to endeavor to recall every item of knowledge that has been obtained either from the study of books or from attendance upon literary or scientific institutions; to gather together the fragments of wisdom which have been learned from the contemplation of nature, or from your own experience in life; to recollect every example of noble minds, and every moral precept which you have been fortunate enough to acquire from the precept or conversation of the intellectual, and to concentrate these upon the furthur practice of that profession which you have selected as the business of your lives?

You are to investigate and understand the wonderful mechanism of man, whom the great poet apostrophizeth as "How noble in reason, how infinite in faculty; in form and feature, how express and admirable! in action, how like an angel! in, aspiration, how like a god!" and you will have to study those causes and effects that teach us forcibly the solemn truth that

> "The hills
> Rock-ribbed and ancient as the sun; the vales
> Stretching in pensive quietness between;
> The venerable woods; rivers that move
> In majesty, and the complaining brooks
> That make the meadows green; and pour'd round all
> Old ocean's gray and melancholy waste—
> Are but the solemn decorations all
> *Of the great tomb of man.*"

If we recall these two ideas, so wonderfully expressed by an ancient and a modern poet, the great and ever occurring responsibilities of the profession of medicine will become plainly evident. Mark how the one, with his keen perceptions and the vividness of his imagination, as though overcome by the beauty and wonder of this masterpiece of all created beings, breaks forth in the immortal words, and gaining strength of expression, as his mind increases in the conception of the greatness of its subject, he cries aloud "*in action how like* an angel! in aspiration how like a god!" This immortal being is to be your constant and untiring study. And, on the other hand, with what pathos does the more modern poet, while contemplating the beauties of inanimate nature, tell us in melodious cadence, which from its softness is almost melancholy, that "The *dead* are all around us," and that "all who tread the globe are but a handful to the tribes that slumber in its bosom."

You, gentlemen, are to study the *living* and the *dead*. You are to examine and understand man, and to appreciate the causes of his destruction. You are to look upon the proud figure erect and firm, with all the freshness and buoyancy of manhood, and see it bowed down to the grave with suffering, nay, even *death*. You are to unravel those mysterious processes that steal the color from the ruddy cheek, the lustre from the sparkling eye, the elasticity from the bounding step, and the strength from the stalwart frame; and *what more?* Is there nothing else? Think all of you who hear me, and your minds will rise to the proud eminence of that calling which you have chosen! You are to understand and employ the means to raise up that prostrate form, to bring back the rose leaves to the pallid cheek, to cause the eye to flash with its wonted brilliancy; and to tell disease that you are prepared to combat it with your knowledge and your skill, your wisdom and your judgment.

When we look upon the profession of medicine in this light, when we believe we have in our grasp medicinal substances, which, when properly prepared and

judiciously administered in accordance with a certain law, are capable of relieving the suffering of our fellow men, can there be a calling in life possessed of such responsibilities, *and so noble*, if properly fulfilled, as that of the physician?

Think of these things. Ponder them seriously in your minds, and with all your energy and health and youth you will endeavor to attain those qualifications which will render you competent to successfully combat disease.

It is my desire to place the importance of your calling in the most vivid manner before you; it is to endeavor to make you feel and love your profession with that firmness of purpose that will enable you to overcome the many serious obstacles which are ever upraised to impede your career; and if there be one among you, who has not now firmly resolved to further earnestly and diligently pursue his studies; if there be one who, having gone thus far, feels a distaste for the profession of medicine, let him here and *now* withdraw himself from the further prosecution of a pursuit which will become more and more repugnant as the shadows of life gather round him, and which will finally, from the neglect that will be almost a necessary consequence of such a condition of mind, desert him when it is too late to retrace his footsteps.

There is no discouragement intended to be conveyed in these words, but I believe from my heart they are true, and I speak them conscientiously.

Let us, then, in order to better appreciate the offices of the Doctor of Medicine, institute a brief comparison between the labors of the physician and those of other avocations in life.

The merchant, for instance, toils for reputation and wealth, and rises to distinction among his fellows by his talents for business, and the promptitude with which his engagements are fulfilled. He attains, if successful, a high position, and is respected by the community in which he lives.

The soldier, through the carnage of battle, amid slaughter and lamentation, by military prowess and foresight, rears a monument to his ambition and decorates his brow with the blood-stained laurels he has won.

The statesman, by his

> "wit and words and worth,
> Action and utterance, and the power of speech
> To stir men's blood;"

by his perceptions and knowledge of political economy, gains for himself an enduring name, and lives forever in the hearts of his countrymen.

The poet and the painter touch the imagination and the sensibilities, and incorporate themselves, by their works, with the age in which they live, and the nation to which they belong; but, gentlemen, whether it be the monarch upon the throne, who wields the sceptre of millions of subjects, whose word is the law and to whom thousands do homage; whether it be the soldier who has advanced to his coveted preferment; whether it be the merchant to whom wealth has extended the ease and luxury of civilized and refined life; whether it be the orator whose inspiring words have roused a sleeping nation from its lethargy of danger; or whether it be the poor in the hovel of wretchedness, or amid debauchery and degradation of both body and mind—all shrink in alarm from disease with its skeleton form, and sad images of suffering and death, and turn to the physician and surgeon for their aid, for the business of their lives is to cope with the king of terrors. After to-morrow night your battle with this adversary begins.

Let us now consider what are the necessary wants of a young physician after the reception of his diploma. Practically speaking, his first want is *money*. He wants money, and as this world goes, he must have money, or he cannot eat, drink, shelter or clothe himself. I think I may safely say that the majority of young physicians are not possessed of an overwhelming amount of filthy lucre. If one in a class of this size has abundance, it is the exception which proves the rule. It is a most blessedly fortunate fact that the generality of physicians and surgeons are not in the beginning of their professional career overstocked with filthy lucre, an abundance of which I have known to spoil not only the best student I ever knew, but one of the best surgeons. Money, then, is as necessary to you as to all others, and you must have it; you want it. But there is a wide, wide distinction between working for the money with which to live, and toiling out your life-long existence for the *love* of it. The one is necessary to your life and position, the other is the root of all evil. Especially is this true in professional life. I venture the assertion that the doctor who practices his profession *entirely* for the *love* of the money he gets out of it, will do more dirty, contemptible tricks, both to his patients and his professional brothers, than any of you can conceive. It will make him pay three visits a day when one only is necessary. It will make him call at lunch time, to prevent paying for his dinner. It will make him buy underproof alcohol to make his dilutions. It will make him use stale medicines, wear a seedy coat, use a rusty lancet and a dirty bandage. It will prevent his buying books, subscribing to periodicals, or purchasing instruments. He will be a great borrower. It will make him *lie* to his patient to prevent an honest physician being called in consultation, for fear of losing the patient and the family. It will make him boil his corks, and, for aught I know, count his globules, so many to the pound, so many to the dose. Get money for what it is worth, but not for the love of it, to keep and to hoard.

How, then, are you to enable yourselves to live?

First, then, by a *stout heart*, and by self-reliance; these two requisites you must have; and I do assure you when we contemplate the position of science of to-day, there is something that tends at least to astonish us. The thoughtful student must stand bewildered at the boundless realms before him; realms of so noble a character that they give tone and magnificence to the age to which they belong; an age that, when compared with those that have passed away, rises so superior, so wonderfully prominent, that the institution of a comparison can only be accomplished after considerable research and mature thought; and what is still more surprising is the fact, that each degree upward in the scale of scientific research is marked with increasing rapidity, that an estimate of averages will give to this present, over every former condition of mankind, an immense preponderance, and if there be offered no sudden impediment to this onward march, we may reasonably suppose that how far soever the scientific physician of to-day is above his brother of the olden time, just so much greater may be the position of the coming doctor over us. But with a stout heart and a determination to succeed, obstacles will gradually but steadily be overcome. Success in the treatment of one case leads to a reputation, and when you have a fair reputation, honestly acquired, then you will have no difficulty in finding the wherewithal to live. There was no more celebrated surgeon than Sir Astley Cooper; let me mark for you in dollars and cents his progress. In his first year he netted about $25; the second, $130; the third, $320; the fourth, $480; the fifth, $500; the sixth, $1,200; the seventh, $2,800; the eighth, $3,660; the ninth, $5,555; and the tenth, $10,500; after this his income amounted to over one hundred thousand dollars per annum.

That man worked for the love of his profession, and the lucre came as a *secondary consideration*, which it is, and ever must be.

Having then looked out in a measure for your bodily wants, what is it you should desire next? A reputation. To acquire a reputation, a laudable ambition is

necessary; not an overweening desire for ascendency, not that ambition which

"Let it once
But play the monarch, and its haughty brow
Glows with a beauty that bewilders thought
And unthrones peace forever."

but a tempered aspiration for elevation in a profession which you love, and which will render you capable of assisting others.

To acquire reputation you must have "honesty of purpose." What do I mean by honesty and morality of purpose? This—that you will attend your patient for the sake of curing him. At once you say, why this is the object of all physicians! I say to you that this is not so in many cases, in very many cases.

Many a doctor feels a very great interest in a patient, because he has an interesting case, and because he desires to witness the effect of medicine administered according to the law *Similia Similibus Curantur*. Yes, this is the true spirit of action. Because the patient lives in a brown stone mansion in Fifth Avenue. Shall I say yes? Because he desires to keep an influential family. Shall I say yes or no? Because he expects a large fee. Yes? Because Mrs. Smith, living in another brown stone house across the way, may send for him professionally. Shall I say yes or no? Put these things all together, and in six years from this date you will see what I mean by honesty of purpose. The physician with honesty of purpose, while he certainly desires what is termed an influential and a well-paying family, will not neglect a poorer patient in a forlorn street. He will even slight the fashionable hysterical female with globus hystericus, lying on a rosewood bedstead, and gyrating her nervous extremities under a silken coverlet, for a hospital patient that lies at the point of death or in a critical condition. He will spend an hour or half a day, without pay, working for the good of his brothers, his science and his school, and give a hurried call to the wealthier patient with a headache from last night's champagne. And, gentlemen, put this down as a rule, and remember it too: in the majority of cases greater reputation has come from the care and attention bestowed upon the poor, than has resulted from the obsequious attention to the rich. Ask any professional celebrity in this country how he attained his reputation, and you will find that it was poor Mrs. A. who had a singular tumor which he removed in a peculiar manner, after days and nights of thought, and weeks and months of attention; or it was the constant attendance for years upon the poor at a hospital; or it was the restoration to health of a pauper afflicted with an anomalous affection.

Especially is this true in surgery. The reputations of the greatest surgeons have been made by attendance upon the poor. The operation for anchylosis of the knee, Mott's ligation of the innominata; the introduction of silver sutures, and many others, were performed upon those who did not belong to the wealthier classes of society.

The next great want of a physician is a wife. A wife, a help-meet. Don't marry for *money alone;* take it if it comes with the wife, as you receive it when it belongs to a reputation. Don't marry for position in society; your diploma given to you at the end of the term opens the door to the best social circles; nay, to the bedchambers of royalty itself. Don't marry because the old ladies say you ought to be married. This is the flimsiest reason of all. Marry for love, clear affection, whole-souled devotion to a noble woman.

It appears to me that the great tendency of this age is to depreciate woman.

Recollect God created man and gave woman to be a help-meet for him. Not of an inferior body, but more beautiful in shape, proportion, and comliness; not of an inferior intellect, but in many ways superior, especially in those points wherein the rougher nature is deficient. Not of the same organization, but endowed with different sensibilities, a different nature, a different taste, and subject to different bodily affections.

The woman is as necessary to the man as the man to the woman; the one to the other as the sun to the soil, the rain to the parching earth, the light to the organ of vision.

And yet with all this the effort is being made to disturb this wonderful harmony of the species. Woman must be a money getter and a money maker in the same spheres as man. She must be educated as a man, taught with men in the same schools. Those delicate sensibilities which place her so far above the man must be torn away; those powers which God Almighty gave her as a help-meet must be altered and hardened.

Don't talk to me of the weakness of the sex, or prate of the inferiority of woman. If you desire to know the power and force of character of a good and true woman, marry one; care for her, tend her, love her; then when you are worn down with work, she will help you; when you are discouraged, she will cheer you; when you are despairing, she will support you; when you are attacked, she will defend you; when you are deserted by all your men friends, close at your side will you ever find her; when you are unfortunate, she will cleave closer to you; when you are in difficulty, she will be certain to find a way for your release; and neither time, nor change, nor aspersion, nay, even crime itself, will separate her from you.

"Oh! woman mother, woman wife,
The sweetest name that language knows,
Thy breast with holy motives rife,
With holiest affection glows,
Thou queen, thou angel of my life!

The greed for gain, the thirst for power,
The lust that blackens while it burns,
Ah! these the whitest souls do flower,
And one or all of these by turns
Rob *man* of his divinest dower.

Yet *man*, who shivers like a straw
Before temptation's lightest breeze,
Assumes the master, gives the law
To her who on her bended knees
Resists the black-winged thunder flaw.

To him, who deems her weak and vain,
And boasts his own especial might,
She clings, through darkest fortune fain,
Still *loyal*, though the ruffian smite,
Still true, though crime his hands do stain.

Not many friends my life has made,
Few have I loved, and few are they
Who in my hands their hearts have laid,
And these were women—I am gray,
But *never* have I been betrayed."

Such are the words of one of our best poets.

But the hour wanes, and my lecture must be brought to its close. Therefore, my friends, must I say good-by.

THE TREATMENT OF TAPE-WORM.—Its chief characteristic is the injection of large quantities of warm water into the colon, after the administration of the anthelmintic. The diet is first regulated, food being given which is supposed to be distasteful to the tape-worm—bilberry tea, sour cucumber, salted meats. The intestine having been, as far as possible, emptied by laxatives, a dose of the extract of pomegranate bark (prepared from the fresh bark) is administered, and then a large quantity of warm water is injected into the rectum. The theory is that the worm, previously brought down into the colon, is prevented by the water from attaching itself to the wall, and is brought away by the liquid in its escape. It is asserted that in every case in which this treatment was adopted the head of the worm was removed.—*London Lancet.*

THE SECONDARY OR IMMEDIATE CAUSES OF DEATH.

BY WALTER Y. COWL, M.D., NEW YORK CITY.

A consideration of this important subject appears desirable at the present time in view of the following facts:

First, There is a broad distinction between the primary and the secondary causes of death.

Second, It is the duty of the physician to know as far as possible what is the immediate cause of death in his patient.

Third, There is an increasing demand among medical men for exact registration of the causes of death, both primary and secondary, by Governmental authority.

Fourth, There is a general lack of exact knowledge regarding the different immediate causes of death, and the fundamental distinction between them and the primary causes.

Fifth, But few of our text books upon the science or principles of medicine, or general pathology, speak of the various modes of dying, and those few but briefly.

That there is a broad distinction between the primary and secondary causes of death is readily perceived upon reviewing the clinical history of any disease that may end fatally—as pneumonia, for example, in the course of which there may suddenly appear a severe dyspnœa with universal subcrepitant rales, showing the presence of pulmonary œdema; this, by preventing the air-cells from receiving sufficient air, frequently causes death in a few hours. Thus, we have the primary cause—the patient's disease, pneumonia—and the secondary or immediate cause—the mode of dying, by apnœa. Again, in death from phthisis as a primary cause, we almost always have as the secondary a gradually increasing exhaustion or asthenia, which, like all the secondary causes of death, is a result of the primary cause. These morbid results of disease or injury which are liable to cause death it is the duty of the physician or surgeon to study and understand, so that as soon as they appear he will recognize them, if such is possible. This early recognition is important, for two reasons:

First, It may so affect the treatment, hygienic and medicinal, that the fatal termination is prevented or postponed.

Second, It generally changes the prognosis for the worse, and thus is oftentimes extremely valuable to the patient's family.

The secondary cause of death, however, is sometimes very obscure, as well as the primary cause; for we must all admit, with Wagner,* that "In individual cases, even where a well-conducted autopsy is made, it is often difficult to determine the exact way in which death has been brought about. Even where we have the most striking anatomical changes, it is not always easy to specify the immediate cause of death."

This shows the necessity of watching the dying patient in order to discover at that time, if possible, the immediate cause of death, and not to leave its determination to the autopsy alone.

After the death, it is now required in this and some other large cities,† by special law, that the doctor shall render a return of the causes of death, primary and secondary, and, in regard to certain diseases and accidents, with great exactitude. This great exactness required will, no doubt, in time, be extended to other important diseases, in order that the statistics collected, from being exact, will be of greater value to medical science.

Thus does it behoove a physician, first making carefully his diagnosis, to attentively observe the signs and symptoms of his patient, particularly at the end, to discover with certainty, if possible, the immediate cause of death, in order to both render a correct certificate and obtain precise and positive knowledge of the different modes of dying.

Too many physicians leave their patients, when death seems imminent, simply to the care of their friends, and we may ascribe to this, in part, that prevalent lack of exact knowledge in regard to the different immediate causes of death and the fundamental distinction between them and the primary causes, which is so very apparent upon consulting the files of death-certificates at our Bureau of Vital Statistics. But perhaps the general practitioner is not so very much to be blamed, for there is little said, in our present text-books, on the different ways in which people die, and still less given in our college courses. But few works speak collectively of the immediate causes of death, although they are so small in number, and what has been written, moreover, is almost entirely the work of a quarter of a century ago. In reality, it appears to be a field of medicine which has been greatly neglected for the past score of years; perhaps because its study does not tend to modify treatment so much as that of other subjects.

Its full theoretical consideration would require a previous course of extended experimentation, observation, and experience; therefore, this paper, which has a more practical than strictly scientific intent, can give but the results of some study and research on the subject, and the observation of a series of sixty cases of death and subsequent autopsy, occurring in hospital practice.

Bichat* has said that death begins either at the head, the heart, or the lungs. Dr. Watson,† however, considers this division insufficient and unsatisfactory, as it does not include anemia (as in profuse hæmorrhages), nor that from starvation (or asthenia, as in phthisis, dysentery, etc.), yet he does not make a classification himself.

Considering the facts—that life directly depends upon the supply of normal blood, which is furnished by the ingestion and digestion of a proper amount of food, and persistently furnished only during the absence of wasting or blood disease, and that exhaustion is due to starvation, indigestion, waste, or blood change—we must conclude that death from asthenia is directly due to a chronic progressive anemia, to a failure of the blood.

We are now prepared to make a classification of the secondary causes of death, as due to

Failure of the blood,
" " lungs,
" " heart, or
" " nervous system.

FAILURE OF THE BLOOD

is due to acute anemia, asthenia, or toxæmia.

Acute anemia is the result of profuse hæmorrhage. Its prominent symptoms are a feeble, slow, and irregular, or absent pulse; paleness of the entire surface, cold sweat, dilated pupils, dim vision, vertigo, and speedy loss of consciousness. The heart, veins, and arteries are found empty after death; all the organs are pale and shrunken.

Asthenia, exhaustion, or chronic anemia, may be the result of any disease, but more especially of starvation, old age, chronic hæmorrhage, or exhausting diseases—such as phthisis, dysentery, typhoid fever,

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* "General Pathology," p. 34, translation. Wm. Wood & Co., New York, 1876.

† Recently, a law has taken effect in the State of New Jersey like that in force in this city. Similar laws will, undoubtedly, in the near future, be passed in the other States.

* "Recherches sur la Vie et la Mort."

† "Lectures on the Science and Practice of Medicine." London, 1848. P. 64.

cancer, continued suppuration, etc., etc. Probably more than one-half of all deaths are due to asthenia. Its symptoms are a feeble frequent pulse, much accelerated on slight exertion, feeble or imperceptible heart impulse, cold extremities, paleness, emaciation, general weakness, flabbiness of the muscles, wrinkled inelastic skin, vertigo, frequent syncope, and a slow death.

After death the adipose tissue is found in most cases much diminished, the muscles are atrophied, and all the organs, perhaps excepting the diseased one, are found below the normal size and usually pale and flabby.

Toxæmia or blood-poisoning is the result of infection with the virus of a rapidly fatal blood disease,* or with certain animal or other poisons, as that of the rattlesnake, prussic acid, etc. These viruses or poisons act upon the blood-cells, and thus render the blood incapable of nourishing the tissues to a rapidly increasing extent, until the patient dies of an asthenia, but one which, different from that of other exhaustive diseases, develops with extreme rapidity, and produces death after but a short period of fever or the other symptoms of the disease. Without doubt, in many cases where the nervous system is constitutionally weakest it is the first to fail, and death occurs in coma or convulsions.

Toxæmia could be here assigned as an intermediate cause of death.

On the other hand, in uræmia, cholæmia, simple narcotic, and some other forms of intoxication, the poison seems to have an intrinsically greater effect upon the brain than the other parts of the system, and hence toxæmia (rather as an intermediate than an immediate cause) produces death by coma or convulsions.

Blood poisoning should only be considered the immediate cause of death when the patient dies before general asthenia from fever, exhaustive drains or lack of food, cardiac asthenia from fever, or any complications—as pneumonia or pulmonary œdema—have had time to develop themselves. The patients are those who are said to die of the intensity of the disease itself—who are "death struck" from the beginning.

The symptoms of fatal blood-poisoning are the symptoms of asthenia combined with those of the particular blood disease present. The blood after death is dark, lacking in fibrin, and thinner than normal, except sometimes in cholera.

FAILURE OF THE LUNGS

is due to apnœa or embolism, or thrombosis of the pulmonary artery.

Apnœa (signifying lack of air), or, as it is more often called, asphyxia,† is due either to obstruction of the air passages, as in croup, pneumonia, capillary bronchitis, œdema pulmonum, undue "anæsthesia," etc., etc.; to an inability on the part of the lungs to respire sufficient air from compression, as in pleurisy, pneumothorax, ascites, burial alive, etc.; to muscular spasm, as in tetanus and strychnia poisoning, or to paralysis of the muscles of respiration. Its symptoms are a sense of want of air, strong contractions of all the muscles of respiration, both ordinary and extraordinary, with absence or faintness of respiratory murmur, gasping and lividity, and finally insensibility, convulsions, and coma; the attack accompanied often by vertigo, tremor, and paralysis.

Its pathology as at present determined, may be briefly expressed:

The blood in the pulmonary capillaries is not oxygenated, consequently the vaso-motor nerves of the smallest arteries, which govern the rate of supply to the capillaries according to the rapidity of oxygenation, cause these arteries to contract, and allow but a small part of the blood to flow on; that part goes through the left heart and is found as venous blood in the pulmonary veins and systemic arteries after death; by far the greater portion, however, is kept back by the spasmodic contraction of the termini of the pulmonary arteries. The right heart is powerless from distention and the great resistance to the onflow of the blood, and after death is found filled, as are the larger systemic veins also, with fluid blood, more especially if the death has been sudden, while the left heart and pulmonary veins are nearly empty.

Embolism of the pulmonary artery is the result of thrombosis of some large systemic vein from phlebitis, pyæmia—puerperal (fever) and surgical—phlegmasia dolens, from ligation or section, and from admitted air. The symptoms, in the main, are those of apnœa; there is an intense want of air, yet the inspiration is free and often deep, and pallor is frequent, although livor is more common. The pulse is small and irregular, or absent; the second sound of the heart and the cardiac impulse are increased; there is tetanic extension and coldness of the limbs, and involuntary evacuations. Death is sudden. The pulmonary veins and left cavities of the heart are found empty, the right cavities and systemic veins greatly distended. From apnœa it is differentiated by the absence of all causes of the former, by the suddenness of the attack, ability of free inspiration, absence of rales, and presence of the respiratory murmur.

FAILURE OF THE HEART

is due to cardiac asthenia, thrombosis of the cavities, or embolism of the coronary arteries.

Cardiac asthenia is the result of fatty degeneration, muscular strain, pericarditis with effusion, myocarditis, pneumonia, phthisis, valvular disease, angina pectoris, leucæmia, and certain zymotic or infectious diseases, especially those with fever.

It is fatal from intrinsic inability to overcome resistance to the flow of blood in fatty degeneration and myocarditis. In pericarditis, with effusion, primarily from intrinsic weakness due to maceration of the cardiac muscle in the effusion, and secondarily from exhaustion developed by the heart's continuous beating through a compressing fluid in a tightly stretched sac.

In valvular disease, phthisis, and pneumonia, the development of the asthenia results from the heart's having a more and more difficult labor to perform; the same is also true of leucæmia and the essential fevers in which there is an obstruction to the blood current (stasis) in the capillaries from their dilation and the greatly increased numbers of adherent white blood-cells; to this is added diminished nutrition of the cardiac muscle from vitiation of the blood (in infectious disease by fever or the poison of the disease or both). In death from muscular strain, as where an oarsman dies in his race, the heart undoubtedly fails from lack of power to meet the excessive resistance offered by the almost continuous contraction of the muscles, and the greatly increased call for blood, due to the rapid metamorphosis necessary to such tremendous exertions.

The distinctive symptom of cardiac asthenia is a pulse which is more feeble and more accelerated than the general (as indicated, for instance, by the muscular strength) would produce, a pulse which, upon exertion, becomes very rapid, and quite irregular both in force and rhythm, and at last stops during some general muscular effort. The diagnosis is also made by exclusion of the other secondary causes of death, by its suddenness, and by the presence of a primary

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* Such fatal infections or zymotic diseases are yellow, cerebro-spinal, typhus, typhoid, and pernicious malarial fevers, variola, scarlatina, measles, cholera, diphtheria, septicæmia, and erysipelas.

† This term is incorrect, as it signifies a state of pulselessness rather than a lack of air, and hence apnœa is the more proper term.

cause of cardiac asthenia. The cardiac cavities are found distended with blood, and the walls often softened.

Cardiac thrombosis as a cause of death is the result, in rare instances, of pneumonia and of acute endocarditis with rheumatism or other disease; in the former, from the slowing of the current in the right heart, and the increased coagulability of the blood: in the latter, from increased coagulability of blood, and inflammation, and roughening of the endocardium, upon which fibrin is more easily deposited. It also occurs in post-partum anemia, due to hæmorrhage or other cause, because of the increased coagulability of the blood and the diminished velocity of the current.

The symptoms of cardiac thrombosis are severe dyspnœa, cyanosis; a feeble, small, irregular pulse, which may be either slow or frequent; cold extremities, delirium, convulsions, coma, and more or less sudden death. The diagnosis, which is mainly by exclusion, is often difficult, except upon post-mortem examination, when the heart-clot must be found to largely fill the cardiac cavity.

Embolism of either coronary artery presents the same symptoms as thrombosis of the cardiac cavities; it is the result of thrombi from the left heart, as in valvular disease.

Its occurrence is rare and the diagnosis is extremely difficult without autopsy.

FAILURE OF THE NERVOUS SYSTEM

is due to shock, coma, convulsions, or cerebral anemia.

Shock is a paralysis of the nervous system in whole or in part, at times complete, again incomplete, and is either the result of a sudden injury to the nervous mass, as in wounds, contusions (fatal concussion), and extensive compression of the brain or cord, or the result of an intense impression upon the nervous system, as in death from lightning, capital operations, or operations with much hæmorrhage or prolonged and deep anæsthesia, burns, opening and exposure of the abdominal cavity, rupture of the heart, or other severe injury (not centric). Shock is more often fatal than statistics indicate, especially after operations, which it may follow with death as late as the third or fourth day.

There is a considerable probability that in many, if not all cases, shock acts principally through the sympathetic, and thus upon the heart, producing death by a true cardiac paralysis; but as of this we are not certain, the term shock is best retained until time shall establish the facts. Again, there are instances in which an anemia of the brain is evident; among such cases of shock are undoubtedly those resulting from intense emotion which are thus strictly analogous to simple fainting, although so much more severe in degree; this cerebral anemia, however, we believe depends upon a paralyzed sympathetic and consequent paralysis and distension of the large veins, more especially those of the portal system (afferent), which alone are able to contain the great mass of the blood. Whether cerebral anemia is present in all cases of shock,* we are at present unable to say.

Its symptoms are a feeble, generally slow and intermittent or irregular pulse, slow sighing respiration, pale face, cold sweat, vertigo, involuntary evacuations, cold extremities, nausea and vomiting, and more or less sudden death. The diagnosis is also made by the suddenness of the attack, the presence of a primary cause of shock, and a fall of temperature† more than 3° F. ‡ (in fatal cases).

We cannot as yet determine from post-mortem examination what essential change (if any) has been effected in the nervous mass, nor where, if at any particular place, such change may lie; we cannot place it at the medulla or par vagum alone, as inclination might lead us to do when considering the sudden death from perforating the floor of the fourth ventricle, for life and the heart's action do not absolutely depend upon the brain or spinal cord—living anencephalous fœtuses have been born and continued existence for a greater or lesser length of time; in animals the heart's action has kept up after both brain and cord have been removed, while artificial respiration was performed; thus it has been established that the contractions of the heart depend upon the ganglionic nerves lodged in the muscle itself. Again, sometimes in death by shock the heart is found contracted, while generally it is distended, so that we cannot say that it is always due to an irritation of the par vagum.

Clinically, we have at present no division of shock, except as due to the various diseases and accidents which cause it.

Coma is the result of a lack of the proper supply of normal arterial blood to the brain; as in cerebral congestion, cerebral compression or œdema, uremia, cholemia, narcotic poisoning or cerebral anemia, or from embolism, etc. Its distinctive group of symptoms are those of general anæsthesia and paralysis, more or less complete. Death follows the paralysis of the respiratory centres of the pons and medulla, sometimes with apnœa from obstruction of the bronchi by mucus.

The gross changes found post-mortem vary with the primary cause of death. Of what minute changes take place in the nervous mass we are as yet to a great extent ignorant, and can only infer clinically that they are general throughout the brain, differing probably in that respect from simple shock, which most often does not affect the entire brain or at least not equally throughout, as evidenced by the retention of the powers of thought, speech, the special senses, and muscular action to some degree, which are totally abolished in well marked coma.

Coma seems to affect chiefly the cerebro-spinal system; shock chiefly the sympathetic. The difference in the force of the pulse appears to bear this out.

Convulsions as an immediate cause of death are, like coma, the result of a disturbed intra cranial circulation: as in cerebral congestion, from insolation, alcoholism, etc.; cerebral compression, from hydrocephalus, apoplexy, depressed bone, and tumors; acute inflammation of the brain or its membranes, as in cerebro-spinal fever and encephalitis, cerebral œdema, cerebral anemia, epilepsy, uremia, eclampsia of parturition and the puerperium, and peripheral irritation as in dentition

The distinctive symptoms are sudden, more or less general, contractions of the muscles, with suspended respiration, lasting but a short period of time and recurring with increased frequency until death.

To what intrinsic process or change of condition in the nervous mass they are due, as well as the principal seat of the change, we cannot as yet positively say, although probably within a short time Nothnagel's theory of "irritation of a convulsion-centre" in the pons will be settled.

Fatal cerebral anemia without shock, convulsions, or coma, is the result of the sudden removal of blood (virtually) from the brain to the portal system; as in entirely unloading a long-distended bladder, withdrawing ascitic fluid improperly, certain cases of rapid parturition, of removal of large abdominal tumors, and sudden muscular exertion calling the available blood elsewhere in aortic obstruction.

The symptoms vary somewhat according to the primary cause of death, but are mainly those of simple syncope prolonged. The diagnosis, however, which is mainly by confining the primary cause to one of those mentioned, is often difficult

* H. Fischer. "Ueber den Shock: Sammlung Klinischer Vorträge. Herausgegeben von R. Volkman." Quoted by Nothnagel on "Cerebral Anemia," Ziemssen's "Cyclopædia of Practical Medicine." Wm. Wood & Co., New York. 1876.

† In all cases, perhaps excepting urethral fever.

‡ Wagstaffe: "St. Thos. Hosp. Reports."

The death is generally sudden. The heart is found either in systole or diastole. Where cerebral anemia is diagnosticated and produces death by convulsions or coma, it is more properly stated as an intermediate than an immediate cause.

The immediate cause of sudden death is in general simple and easily determined, while a slow death has often more than one factor. This renders it more difficult to fix upon the main cause or causes, for, as has been truly remarked by Aitkin: "The distinctness of each mode of death generally depends upon its speedy supervention."

There are a number of terms in use to designate secondary causes of death, which are less definite than those already given, and therefore better replaced by them in order to secure precise and uniform registration.

Syncope, signifying fatal stoppage of the heart, may be due to either shock, cardiac asthenia, cerebral anemia, or cardiac thrombosis, and is therefore too indefinite; while the term has a better application when used only for simple fainting (temporary cerebral anemia).

Heart failure is a synonym for cardiac asthenia, but not as definite. The term cardiac paralysis is in frequent use, as an immediate cause of death, by the Germans; yet we think, with Loomis,* that it is very seldom, if ever, that we can positively assign true paralysis of the heart as the immediate cause of death. Paralysis of a part is due to a failure of its motor nerves; this,† we believe, takes place in the heart in shock, but it is not in cases of shock that paralysis of the heart has been used as a cause of death.

Collapse is a term which has been used for an obscure shock or asthenia or acute anemia (from internal hæmorrhage), by which it may properly and with more definiteness be replaced where possible. Occasionally sudden death, in a patient slowly dying of an exhausting disease, is due to shock or acute anemia, and asthenia.

As concussion may produce death, either by shock, with which its primary symptoms are identical, or secondarily by coma from meningitis or asthenia from lack of assimilation, it is best given as an immediate cause of death.

Death from inanition is more clearly stated by its primary cause—starvation, and secondary—asthenia; which terms although almost synonymous, are both necessary to complete registration.

Similarly, death ascribed to senectus or senility as a primary cause should be followed by asthenia, thus intimating the absence of other secondary causes, if such be the fact.

Paralysis of the vagus has been frequently assigned as a secondary cause of death, more especially in Germany; and while correctly based, without doubt, yet the knowledge of its distinctive symptoms (principally an infrequent, irregular, often intermittent, and stertorous respiration, with great dyspnœa and a very rapid pulse, which is frequently irregular or intermittent) is confined to so few that we need not as yet admit the term to a practical, and necessarily more or less temporary, classification of the immediate causes of death, more especially as the cases are quite rare in which the death is not preceded by a deep coma, and even in these (wounds of the medulla oblongata and apoplexies momentarily fatal as that of the medulla) the question of shock claims careful consideration.

As to death from pulmonary congestion and œdema, it may be best reported, to secure uniformity, as due to apnœa from pulmonary congestion and œdema. Again, in concussion from a fall, the primary cause is the fall; the secondary or immediate, shock from concussion as an intermediate cause; and, in general, wherever there are intermediate causes of death, it is well to state them in the same explicit way, in order to secure that completeness of records which alone is of great value.

Finally, in regard to the whole matter of secondary causes of death, we are far from a satisfactory knowledge, and therefore it may be said that the present paper is but an endeavor to provide a temporary classification of the different causes of death in so simple a way that it may be used to secure uniformity and approximate exactness in registration, and thus tend to give more value to our mortuary statistics.

TABLE OF SECONDARY CAUSES OF DEATH.

From failure of the blood.

Acute Anemia. Due to profuse hæmorrhage.
Asthenia. Due to starvation, indigestion, or disassimilation; drains, fever, or prolonged toxæmia.
Toxæmia. Due to acute infectious disease, or animal or other poison (urea, cholesterine, prussic acid, etc.)

From failure of the lungs.

Apnœa. Due to obstruction, compression, paralysis, or spasm.
Embolism of Pulmonary Artery. Due to distant thrombosis
Thrombosis of Pulmonary Arteries. Due to puerperal anemia.

From failure of the heart.

Cardiac Asthenia. Due to parenchymatous disease or continuous abnormally increased labor.
Embolism of the Coronary Arteries. Due to distant thrombosis.
Thrombosis of Cardiac Cavities. Due to obstruction, blood change, roughened endocardium, and parenchymatous disease.

From failure of the nervous system.

Shock. Due to centric lesion, peripheral lesion or irritation, electricity, or excessive emotion.
Coma. Due to abnormally diminished nutrition of brain, or toxæmia.
Convulsions. Due to abnormally diminished nutrition of brain, inflammation, peripheral irritation, or toxæmia.
Cerebral anemia. Due to suddenly diminished intra-abdominal pressure or "aortic obstruction."

A TABLE OF THE PRIMARY CAUSES OF DEATH,* WITH THE RESULTANT SECONDARY OR IMMEDIATE CAUSES OTHER THAN ASTHENIA.

Acute Alcoholismus. Coma from cerebral congestion, convulsions, or cardiac asthenia
Air in Veins. Embolism of pulmonary artery.
"Anæsthesia." Apnœa, shock, cerebral anemia or coma (from toxæmia).
Anasarca. See *Bright's Disease* and *Cardiac.*
Angina Pectoris. See *Cardiac.*
Aortic Obstruction and Regurgitation. See *Cardiac.*
Apoplexy, Cerebral. Coma, convulsions, or shock.
Apoplexy of Lung. Shock or apnœa from pulmonary œdema.
Ascites. Apnœa or cerebral anemia (sudden removal.)
Atelectasis. Apnœa.
Atony of Bladder. Cerebral anemia (sudden removal of entire residual urine).
Biliary Calculi. Shock (rupture of duct).
Bright's Disease. Coma and convulsions from uræmia or meningitis, apnœa from pulmonary congestion and œdema, or œdema of glottis, or cardiac asthenia from pericarditis.
Bronchitis, Capillary. Apnœa or coma.

* Oral com.
† Paralysis of sympathetic (motor nerve of heart).

* Other than those ending simply in asthenia, which may end any disease.

Burns. Shock, coma, or convulsions.
Cancer. Acute anemia.
CARDIAC:
Angina Pectoris. Shock or cardiac asthenia.
Aortic Obstruction. Cardiac asthenia or cerebral anemia.
Aortic Regurgitation. Apnœa from pulmonary congestion and œdema, cardiac asthenia, or coma from cerebral apoplexy or embolism.
Endocarditis, Acute Ulcerative. Apnœa from pulmonary congestion and œdema, cardiac thrombosis, embolism of coronary arteries. See also *Myocarditis.*
Endocarditis, Chronic (Valvular). Coma from cerebral embolism or embolism of coronary arteries.
Fatty Degeneration. Cardiac asthenia, shock from rupture or cardiac thrombosis.
Mitral Obstruction. Apnœa from pulmonary congestion and œdema.
Mitral Regurgitation. Cardiac asthenia or apnœa from pulmonary congestion and œdema.
Myocarditis (often with pericarditis and endocarditis). Cardiac asthenia, shock from rupture, or cardiac thrombosis.
Pericarditis. Cardiac asthenia, apnœa from pulmonary congestion and œdema, or cardiac thrombosis.
Rupture. Shock.
Tricuspid, Regurgitation. Cardiac asthenia.
Catheterization. See Urethral Chill.
Cerebral Embolism. See Embolism.
Cerebral Softening. See Softening.
Cerebro-Spinal Fever. Coma, convulsions, cardiac asthenia, or toxæmia.
Child-Birth See Parturition.
Chill, Congestive. See Malarial Fever, Pernicious.
Chloroform. See Anæsthesia.
Cholæmia. Coma or convulsions.
Cholera. Toxæmia or coma.
Cholera Infantum. Coma or convulsions.
Cirrhosis of Liver. Apnœa from ascites, coma, or acute anemia.
Cold, Excessive. Coma from cerebral congestion.
Compression of Brain. Coma or convulsions.
Concussion. Shock, coma, or convulsions from meningitis.
Congestion of Brain. Coma or convulsions.
Congestion of Lungs. Apnœa from œdema.
Congestive Chill. See Malarial Fever, Pernicious.
Contusions. Shock.
Croup. See Laryngitis.
Delirium Tremens. See Alcoholismus.
Dentition. Convulsions or coma.
Diphtheria. Apnœa, toxæmia, coma, and convulsions from uremia, or cardiac thrombosis.
Dissecting Wounds. See Wounds.
Drowning. Apnœa.
Electricity and Lightning. Shock.
Embolism, Cerebral. Shock, coma, convulsions.
Emotion, Excessive. Shock.
Emphysema. Apnœa from capillary bronchitis.
Empyema. Apnœa from compression or pulmonary œdema.
Endocarditis. See Cardiac.
Epilepsy. Convulsions.
Erysipelas. Coma, convulsions, toxæmia, or cardiac asthenia.
Ether. See "Anæsthesia."
Fatty Heart. See Cardiac.
Freezing. See Cold.
Fractures. Shock, coma, acute anemia.
Fright. See Emotion.
Gall-Stones. See Biliary Calculi.
Gangrene of Lungs. Apnœa from pulmonary œdema.
Gastritis, Simple, Acute, and Gouty. Shock.
General Paresis (or *Paralysis*). Convulsions or coma.
Gout. See Gastritis.
Hanging. Shock or apnœa.
Hernia. Shock.
Hydrocephalus. See Meningitis.
Hydrophobia. Convulsions, cardiac asthenia.
Infiltration of Urine. Shock.
Insolation. Coma
Intermittent Fever. See Malarial Fever.
Intussusception of Intestine. Shock.
Jaundice. See Cholæmia.
Laryngitis, Acute, Catarrhal, and Croupous. Apnœa.
Lightning. See Electricity.
Leucæmia. Cardiac asthenia.
Malarial Fever, Pernicious. Toxæmia, acute anæmia, shock, or coma.
Measles. Apnœa from croupous laryngitis or capillary bronchitis, toxæmia, acute anemia, coma, or convulsions.
Meningitis, Cerebro-Spinal. See Cerebro-Spinal.
Meningitis, Simple, Traumatic, and Tubercular. Coma, convulsions, cardiac asthenia, or shock.
Mitral Obstruction and Regurgitation. See Cardiac.
Muscular Strain. Cardiac asthenia.
Myocarditis. Cardiac asthenia or shock from rupture.
Nephritis See Bright's Disease.
Œdema of Brain. Coma or convulsions.
" " *Glottis.* Apnœa
" " *Lung.* Apnœa.
Operations. Acute anemia, shock, cardiac asthenia, toxæmia from septicemia, embolism of pulmonary artery or cerebral anemia See also Anæsthesia.
Paralysis, General. See General Paresis.
Parturition. Shock, convulsions, acute anemia, cardiac asthenia, cerebral anemia, or coma from apoplexy or eclampsia. (See also Puerperal.)
Perforate Foramen Ovale. See Atalectasis.
Pericarditis. See Cardiac.
Peritonitis. Shock, coma, convulsions, or cardiac asthenia.
Pertussis. Apnœa from capillary bronchitis, convulsions, or coma from cerebral congestion.
Phlebitis. Embolism of pulmonary artery.
Phlegmasia Dolens. Embolism of pulmonary artery, or cardiac or pulmonary thrombosis (not secondary).
Phthisis. Apnœa from pulmonary congestion and œdema, acute anemia or cardiac asthenia.
Pleurisy, with Effusion. Apnœa or coma.
Pneumonia, Croupous and Catarrhal. Apnœa, coma, convulsions, or cardiac asthenia.
Premature Birth. Apnœa.
Puerperal Anemia. Cardiac thrombosis.
" *Fever.* See Septicemia.
" *Thrombosis.* See Phlegmasia Dolens.
Pulmonary Apoplexy. See Apoplexy.
" *Congestion.* See Congestion.
" *Gangrene.* See Gangrene.
" *Œdema.* See Œdema.
" *Tuberculosis.* See Phthisis.
Pyæmia. Toxæmia, apnœa from empyema, coma, embolism of pulmonary artery.
Quinsy. See Tonsillitis.
Rheumatism, Acute. Cardiac asthenia, cardiac thrombosis or apnœa from pulmonary œdema. (See also Endocarditis, under Cardiac.)
Rupture of Heart. See Cardiac.
Scarlatina. Coma and convulsions from uremia, acute anemia, toxæmia, or cardiac asthenia.
Septicæmia. Toxæmia, cardiac asthenia, or coma.
Small-pox. See Variola.
Softening of Brain. Coma or convulsions.
Spina Bifida. Shock from rupture or convulsions.
Suffocation. See Apnœa.
Sunstroke. See Insolation.
Syphilis, Neonatorum. Convulsions.
Tetanus, Acute. Apnœa, convulsions, or coma.
Tonsillitis. Apnœa.
Tricuspid Regurgitation. See Cardiac.

Tuberculosis, Acute, General. Cardiac asthenia, coma, or convulsions.
Tuberculosis of Lungs. See Phthisis.
Tumors. Acute anemia, apnœa, or cardiac asthenia.
Typhoid Fever. Toxæmia, cardiac asthenia, coma, and convulsions from uremia, apnœa from pulmonary congestion and œdema, acute anemia or shock.
Typhus Fever. Toxæmia and coma, cardiac asthenia, apnœa from pulmonary œdema, convulsions and coma from uremia.
Ulcer of Stomach. Acute anemia, shock.
Ulceration of Intestines. Shock.
Uremia. Coma and convulsions.
Urethral Chill. Shock, coma, and convulsions from uremia.
Valvular Disease. See Cardiac.
Variola. Toxæmia, apnœa, coma and convulsions from uremia.
Wounds. Shock, acute anemia, apnœa, toxæmia or cerebral anemia. See also Septicemia and Pyemia.
Wounds of Brain. Shock, acute anemia, coma or convulsions.
Wounds of Heart. Shock or acute anemia.
Yellow Fever. Toxæmia, convulsions and coma from uremia, cardiac asthenia or acute anemia.

BERBERIS AQUIFOLIUM.

By George William Winterburn, M.D., N. Y.

Berberis aquifolium is a firm, bushy shrub, of the natural order *berberidaceæ*, growing to the height of four or five feet, in the woods of Oregon. It delights in high altitudes, but is cultivated in gardens, and is much esteemed as a flowering shrub on account of its beauty. The leaves are pinnate, and, instead of the soft bristles of the berberis vulgaris, have spinulose teeth. They are leathery in texture, dark green in color, glossy, and resemble the leaves of the holly. The flowers are yellow, and are upright; not in hanging clusters as on the berberis vulgaris. The berries are intensely sour, and dark-colored, instead of scarlet as in the better known variety. The *root* is the part used. It is very hard, of a bright yellow color, and an intense, but agreeable bitter. Jungk has discovered a new alkaloid in this berberis, to which he gives the name *Mahonia*, C 14 H 19 N O 4. It differs from berberis in having six equivalents less of carbon, and two more of hydrogen. Mahonia does not, however, represent the full therapeutic value of berberis aquifolium, and is probably only one of several constituents.

I have proved this drug quite thoroughly on two men and three women, and have tested it clinically in a wide range of cases. The provers took under my direction the fluid extract of the root (Parke, Davis & Co.) in doses from ten drops to three ounces; the experiments extending over about three months.

The characteristics of the drug are tabulated in the following scheme.

Its analogues appear to be Aurum, Berberis vulg., Bryonia, Calcarea, Capsicum, Causticum, Drosera, Grindelia, Squar., Hydrastis, Nux vom., Oleander, Ruta and Spongia.

Mental Sphere.—Unhappy and depressed; sudden depression of spirits without cause; profound depression, amounting to anguish; hysterical crying at frequent intervals; nervous and restless; disinclination to move; dull and stupid; disinclined to do anything, but not sleepy; very drowsy in the day-time.

Head.—Dizzy sensation; pain on right side (pressing like a weight); pain in the right temple, running down into the teeth.

Eyes.—Hollow-eyed; burning and aching in the eyes as if strained; film before the eye; congestion of the lower palpebral conjunction.

Nose.—Stuffish feeling, with discharge of greenish yellow mucus.

Face.—* Blotches and pimples on the face; yellow skin; flashes of heat in cheeks; pinched expression of the face; ° impetigo figurata; ° eczema infantile.

Mouth.—Increased flow of saliva; bilious taste after eating; yellow-brown, deeply-coated tongue; white, pasty, thick coating on tongue; tongue feels as if blistered; blisters on right side of tongue; scanty expectoration; yellow, sticky, tenacious expectoration; expectoration streaked with blood; soreness in teeth of lower jaw; soreness in the salivary glands; ° cancer of the tongue; dry throat.

Stomach.—Hungry soon after eating; constantly hungry, but still could not eat; hunger with aversion to food; canine hunger; sudden nausea after eating; burning in stomach; borborygmi; cramp in stomach; no appetite; heartburn.

Abdomen.—Uneasy feeling, without desire for stool; heat in the region of the spleen; burning sensation in the spleen; spleen feels as if it had been struck; pain in hypogastrium.

Stool.—Large, loose, free movement (four times first day of proving); hot, griping stool (second day); light-colored stool, expelled with difficulty; lumpy stool, looks as if each lump was varnished; soft stool, expelled with great difficulty.

Urinary Organs.—Urine less than normal, clear and without sediment; urine sherry wine color; urine enormously increased in quantity.

Generative Organs.—Slight burning in vagina; wind from vagina; bearing down pains; aching as if menses were about to come on; ° delayed menses restored (in two cases); ° amenorrhœa; very decided increase of sexual desire.

Chest.—Unusual weak feeling in the chest; "Have wondered whether it was the beginning of consumption;" weakness of the upper part of the chest; oppression as of a weight on the chest; burning heat in the lower left lung; ° phthisis pulmonaris.

Larynx.—Voice very weak, "as if a damper had been closed on it;" dry, nervous cough.

Upper extremities.—Flashes of heat and burning in the palms of the hands; tremor in hands and arms; inability to raise the arms from the side; numbness and immobility of the arms; lameness of the arm; * rheumatism felt only when moving the part; prickling on the outside of hand and forearm.

Lower extremities.—Heaviness and trembling of the limbs; bruising pain in the extremities; cramp in left leg; cramps in the calves of both legs; inability to lift the right foot; rheumatic tension and stiffness of the legs.

Fever.—Pulse raised fifteen to twenty beats.

Skin.—° Salt rheum; °eczema impetiginodes; ° herpes zoster; ° rupia syphilitica and escharstica; ° pityriasis capitis; ° psoriasis diffusa.

General Symptoms.—Weak and depressed; feels very tired without cause; weak and tired in the morning, wants to go back to bed, better after exercise; griping pain down the whole right side; rheumatic pain on right side; rheumatoid pains over the whole body, making one keep very still; bone pains; ° scrofula; ° syphilis.

The mental symptoms appeared usually on the second day, continued through the proving, and for several days subsequently. The pains in the head disappeared during the latter part of the proving, and were transitory and recurring. The dizzy sensation, worse when stooping or moving, was part of the general biliousness caused by the drug.

Upon the eyes it has an especial action, producing a sensation like a film. They look weak, as if tired. In one prover, the palpebral conjunctiva was very decidedly injected. This feeling of weakness persisted in one case for several weeks after the medicine was suspended.

The increased flow of saliva was probably due to the bitterness of the medicine, but the other mouth symp-

toms are characteristic. The bilious coating of the tongue dated from the second or third day; the blistering of the tongue about the end of the second week; and the soreness of the salivary glands and dry throat during the third week.

Dyspeptic hunger without desire for food, and with burning in the stomach, was noticed from the first The cramps in the stomach and "no appetite," occurred during the second and third weeks. No direct sensations were felt in the liver, but this drug evidently affects the whole glandular system, including the liver. Biliousness was a marked feature in all the provers, and one had a peculiar waxy look like the beginning of jaundice. Upon the spleen it has a very positive action, causing intense burning and a feeling as if it had been pounded. This burning in the spleen was a very marked effect in all the provers, commencing about the seventh or eighth day, and persisting until the drug was discontinued, producing a soreness in that viscus of which the provers complained bitterly.

All the provers had large, free, dark movements on beginning the medicine; one had hot, bilious diarrhœa. This was followed by light-colored, varnished, constipated stools. Subsequently the stool became soft and natural in quantity and color, but too large, and expelled with great difficulty. If pushed, the drug would apparently produce paresis of the rectum.

It had a manifest effect on the kidneys of all the provers, but increasing in some and decreasing in others, the amount of urine voided. The effects on he generative system were not marked, except a peculiar bubbling of wind from the vagina and unusual sexual desire (same person).

On either the third or the fourth day each of the provers had what seemed like a bilious cold, the throat choked with mucus, the voice rough and somewhat hoarse, the expectoration yellow, and becoming in a day or two greenish. The throat was not relaxed, the prover could sing *in tune* and without fatigue, but the voice sounded muffled, as if a damper had been closed in the larynx. This condition developed by the fourth week into a most interesting phenomenon. The peculiar lack of *timbre* in the voice; the oppression and weakness of the upper portion of the chest; the dry, irritative cough; the scanty, tenacious, blood-streaked expectoration; the pinched expression of the face; the previous gastric disturbance and the present languor and debility; the accelerated pulse and heightened temperature, gave a startlingly vivid picture of phthisis pulmonalis.

The symptoms in the extremities presented certain peculiarities. When the parts were perfectly still they were free from pain, though sometimes there was a feeling of numbness, and a sense as if there was not strength of will to lift the part. On movement there were cramps, trembling and uncertainty of motion, and pain. The latter was sometimes severe, and resembled that following a heavy blow. The condition stimulated both rheumatism and paralysis. There is a form of paralysis, arising from exposure to damp cold, which includes numbness, immobility, and pain.

One prover noticed, for several weeks after discontinuing the medicine, a peculiar prickling, like electricity, on the back of the hand and outside of the forearm. This lasted only momentarily, but it returned frequently, and seemed to be independent of occupation, position, or time of day.

The proving gave slight indication of its great value in skin disease. Blotches and pimples annoyed the provers, and they all subsequently noticed that the skin was smoother and softer than previous to the proving; but, though it was given in as large doses as the stomach would stand, nothing more serious was developed.

It has, however, sterling merit in the treatment of skin diseases, being alike useful in the mere roughness caused by exposure to wind and weather, or resulting from the continued use of cosmetics, up to the acrid corroding ulcers of syphilis.

It is equally beneficial in many diseases of the mucous surfaces, either of the air passages, digestive tract, or genito-urinary organs. It has cured for me obstinate chronic tonsillitis, chronic parotitis, and chronic trachitis, with scanty, gummy, tenacious expectoration. But it will go deeper than these superficial ailments, and in incipient phthisis will restore gastric energy, and so modify the tubercular diathesis as to remove every vestige of pulmonic disease. Even when the mischief is considerable, it will arrest its rapid course, bring the pulse back to its normal standard, allay local irritation, and prolong life.

All the members of the berberidaceæ are antiperiodic. Berberis aquifolium is eminently so. It is considered by some as equal to quinine. It is certainly superior to hydrastis and gentian, and in sensible doses, say twenty minims of the fluid extract, is quickly curative.

In more moderate doses, three or four drops, it quickly relieves congestion in the liver and kidneys, increases the activity of the spleen, and removes hypertrophy when present, both here and in the prostate.

In rheumatism, I have seen it speedily cure when the pain was like that from a blow, with lameness and stiffness; or when there is no pain except on movement —the patient dreads to move on account of the pain. And it might be of service in paralysis from damp cold, as shadowed forth in the pathogenesis.

But it is especially in what are called blood diseases, syphilis, cancer and scrofula, that the value of this remedy has been shown. In secondary and tertiary syphilis, in five drop doses of the 1 x dilution, it will often unaided eliminate the morbific matter from the system. The drug has been so recently introduced, that its exact position in relation to other blood remedies cannot yet be stated; but that it is a valuable addition is evident to all who have tried it.

I have never used a dilution beyond the 2 x, and I usually prescribe a drachm of the fluid extract in four ounces of simple syrup, a teaspoonful every two to six hours, *pro re nata*. As there have been spurious articles put on the market, I would suggest to those who would like to try the remedy, that they procure Parke, Davis & Co.'s fluid extract, and make their own dilutions, as that is the preparation with which the above proving was made.

EYE AND EAR SYMPTOMS IN PROVINGS.

By John C. Morgan, M.D., Philadelphia.

Dr. Campbell, of St. Louis, and the Ophth. and Otol. Society, are entitled to our thanks for calling attention to the mode of observing these. But some of Dr. Campbell's specifications need criticism.

1. (*Hahn. Monthly*, Aug., '79, p. 467,) "The prover should be in perfect health." If this mean "without organic defect," or still more, if it mean "without functional defect," then we must abandon all provings until a perfect standard is agreed upon, and the number of possible provers will be very small indeed. But contrariwise, e. g., a hypermetropic prover, by drug-weakening of the accommodative function of the eyes, will develop a legitimate symptom, to wit: *asthenopia*, which the perfect or emmetropic eye might not reveal. This, along with other bodily weaknesses, all of which may be duplicated in our patients, and by which symptoms we may cure them, on the old Hahnemannian basis of "totalities." The truth is, that these individualities, or abnormalities, or idiosyncrasies, or susceptibilities, render such persons more valuable as provers than those who are perfectly normal, and therefore *insusceptible*. Only an intelligent estimate of the (predetermined) defect is requisite to its proper use, as Dr. Campbell has shown.

2. The same line of thought applies to "motes

before the eyes." True it is that we all have them. But the writer is disagreeably conscious of some permanent ones, which first appeared after *Graph.* had been taken. And, moreover, a drug which diminishes the density of the vitreous (by affecting the circulation of the choroid) may cause the reappearance of forgotten "motes" by their gravitation into the field of vision from above (where they usually hide). Hence, even old motes made visible become a legitimate symptom in a proving, and may lead to cures of fluid vitreous, etc.

3. Greenish-yellow appearance of white paper I have myself experienced, after taking *Santonine*. The exercise of ordinary intelligence is sufficient to obviate the mistake of *first looking at the sun*.

4. Provers should *not* avoid noting and perpetuating such symptoms as "mucus in the eye, obstructing sight." As well may they neglect to note "mucus in the stools;" this symptom of *Argent nit.*, being a truly characteristic one, as shown by the fact that the mucous membrane in general sympathises with that of the eye in its total effects (see Mat. Med.). The symptom thus objected to is also but a small part of the 7th eye-symptom in Jahr's Symptomen-Codex; a long sentence full of collaterals directly relating to ophthalmic inflammation of no small importance, as the most superficial reader can perceive. Provers should most carefully "note and perpetuate" such symptoms.

5. Under ear provings we are told that the precise quantity of *tinnitus aurium*—that is, the pitch and other variations of the morbid sounds, whereby they resemble certain natural noises, is irrrelevant, or even fanciful, just as some other critics decry all other subjective symptoms whatever. But there is yet too much truth waiting to be found out in all these fields for any of us to say that these very symptoms may not some day attain the very highest rank. Observe all of them and let them wait; they will keep! Besides, the function of the cochlea, in relation to recognizing the pitch of sounds readily, suggests that already a catarrhal thickening of the membrane closing the fenestra rotundum may be measured by the gravity of the sounds—i. e., the rate of vibration permitted in the transmission of (e. g.), jugular noises. Or it may be found that mastoid catarrh and Eustachian catarrh, etc., etc., present diversities of this kind. Moreover, personal experience, as well as observation, enables me to say that this common statement of aurists (which I have myself quoted elsewhere) that "people draw their similitudes (in describing their tinnitus) from sounds with which they are familiar," is only partly true, and that it is but following the bad example of our predecessors to dispose of the subject so magisterially, simply because we are still ignorant of much that should be known, and that shall yet be familiar.

Finally, *all facts should be observed and recorded just as they occur*, and this too without too much intellectual analysis. Our sensations do not usually mislead us; it is our intellectual analysis of them, with insufficient self-distrust, that does the mischief. Thus, a lady saw the ocean this summer for the first time in her life. She *saw* a greenish-blue expanse in motion. Intellectually she *thought* it was a forest agitated by the wind.

Let, then, *all* observed facts be noted. In good time when our skeptics and believers are alike forgotten, the truth that is in them shall be seen, understood, explained, and the millenium of universal health shall be hastened.

Lastly, the cure by *Lycop.*, of tremulous iris, after cataract extraction, is on record as *a fact*. Let the critics appoint a competent oculist to examine the patient. Until then it will be quite as scientific to believe it, as to denounce it; to explain it, as to explain it away—or worse, to treat it with contempt.

PRIMARY ACUTE PURULENT INFLAMMATION OF THE MIDDLE EAR.

By H. Knapp.

(Excerpted from the Archives of Otology.)

The climate of New York is distinguished not only by the extremes of heat and cold during the year, but by abrupt and great changes of temperature during the same day.

The situation of New York, near the ocean, favors, on account of the well-known dangers of sea-bathing, the occurrence of acute inflammation of the ear. My private and clinical material of ear diseases amounted to 8,229 patients, among whom there were 564 cases of acute otorrhœa, which, therefore represented 6.53 per cent. of the total number of ear diseases. Acute otorrhœa seems to occur as frequently among the wealthy as among the poor, since private practice shows no essential difference from hospital practice. The greatest contingent is furnished by the age of childhood, particularly the period from birth to the fifth year; next in relative frequency is the period from the 6th to the 10th year; then the age of the most robust manhood, from the 31st to the 40th year. The winter months furnish a considerable larger number of acute suppurative inflammations of the middle ear than the summer months. Exposure by standing in cold water, rapid cooling of the body, draughts during perspiration, and sea voyages were the most common causes of the primary purulent inflammation of the middle ear. Sea bathing enters with 8.78 per cent. into the etiological table. Sea water is injurious:

(*a.*) By its low temperature.

(*b.*) By the large quantity of salt it contains, causing a direct irritation to the drum membrane and its adjacent parts.

(*c.*) By its impulse; the mechanical irritation of the membrana tympani and its surroundings, causing congestion and swelling of tissue, according to the well known "beating experiment," (Klopfversuch) of the skin.

(*d.*) By its contamination with fine sand, slime, small animals and plants. The substances are difficult to remove from the ear, and find a convenient lodging place in the sinus, between the lower portion of the membrana tympani and the adjacent part of the auditory canal, where they cause inflammatory irritation, both by mechanical and chemical actions.

The prejudicial effect of the local action of sea water is increased by some of the physical properties of the ocean bath acting on the system. For instance, the great loss of heat in the whole body, the damp and cold sea air, and the damp bed linen and covers, all apt to occasion inflammation of the middle ear by the mediation of rhino-pharyngitis. Sea-bathing, aurists should caution their patients against.

Scarlet fever is represented with 7.14 per cent. among the causes of acute purulent otitis media.

Diphtheria was observed in four cases. Only in the last of these four cases the diphtheritic process extended into the ear.

Measles and pneumonia furnished three cases. The inappropriate use of the nasal douche produced acute suppurative otitis in three cases.

In chronic affections of the ear, I have more frequently witnessed the injurious effect of water passing into the ear through the Eustachian tube. Only cold water produced severe symptoms, among which sudden intense pain was the most notable. In the majority of cases this pain disappeared in a few hours without leaving any consequences. A few times I had an opportunity to examine the membrana tympani under these conditions with an ear mirror, and found it more or less uniformly red, as it is seen in

acute aural catarrh, or after prolonged syringing. In such cases I made Politzer's experiment while the patient was bending his head forward. Some patients, accustomed to use Politzer's bag at home, resorted to the same expedient on their own accord. I have frequently seen mild and temporary symptoms of irritation to follow the entrance of liquid into the ear during the use of the nasal douche, but severe symptoms only in about half a dozen cases. In one case double-sided acute otorrhœa occurred in the course of ophthalmic-blennorrhœa neonati. This coincidence is neither rare nor unknown. I believe that the acute otorrhœa is caused by the cold water running from the iced compresses applied to the eye, over the cheek into the ear. Bearing in mind the injurious effect of cold water running into the ear, I warn, not only the attendants of children, but all patients who apply cold water to the eyes, lest the water run into the ear. Besides this, I recommend them to put some cotton into the ears. We find that in acute purulent otitis media, the perforation of the membrana tympani occurs during the first week of the disease in 82 per cent. of the cases. I am convinced that many a case which runs its course from beginning to end as acute aural catarrh, would manifest itself as acute purulent otitis if puncture of the membrana tympani were made. Severe symptoms of irritation, throbbing in the ear, redness and bulging of the membrane, mucus rales on inflation and the like, are cured in many cases without spontaneous or artificial perforation of the drum head. The recovery in most of these cases is complete, and by no means protracted. Perfect recovery, with good hearing, 118 cases, i. e., 64.83 per cent. Permanent and complete cure is the rule—at least 80 per cent. in primary acute otitis media purulenta. In treating acute otitis purulenta, I have laid greater stress on the necessity of rest to the patient than is commonly done. Rest, if we want to secure perfect restoration, is as indispensable in acute inflammations of small organs as in that of large ones, where, *de facto*, it is a matter of necessity, not of choice. As I strongly advise patients with acute iritis, or acute ophthalmo-blennorrhœa to remain in bed and take care of nothing but their eyes, in order to receive the full enjoyment of perfect sight, and not expose themselves to the development of permanent synechiæ opacities and even the destruction of the visual organ; in the same way I advise patients suffering from acute otorrhœa to remain in bed and take care of nothing but their ears, in order to reduce the action of the heart to a minimum, keep the whole skin equally, and in an imperceptible, or at times, in a low degree of perceptible perspiration. These conditions I consider essential if we want to cure an inflammatory affection readily, safely, and completely. As robust patients are loth to relinquish their accustomed activity when suffering from inflammatory affections of small organs, it is the duty of the physician to call their attention to the consequences and dangers of an incomplete recovery. The oculist is commonly more readily obeyed than the aurist and the general practitioner. The practitioner, for instance, is, in spite of all admonitions, in many cases unable to keep his gonorrhœa patients at home and in bed, which precaution, I am inclined to think, would obviate gleet and stricture more effectively than all general and topical remedies together. The more extensive my medical experience grows, the more importance I attach to the establishment of physiological sanitary conditions in contra-distinction to the remedies of the pharmacy, although I am no nihilist. In many cases of the disease underconsideration, I have most positively observed of what advantage, rest, of what disadvantage, unrest or imprudence, is. Concerning the dangers of imprudence, I beg to recall the case of the German hotel keeper, who, while convalescent from a severe otitis media purulenta, by visiting his friends, and taking spirituous liquors, brought about a relapse, which terminated fatally in four days. On the other hand, I found that when the patients remained at home, and took good care of themselves, the perforation of the membrana tympani closed in the shortest time, and complete recovery was obtained. My ophthalmic practice, especially the operative, has forced the conviction upon me that rest in bed is of the greatest advantage in every acute inflammation of some importance. The same principles have guided me in the treatment of acute inflammations of the ear, and I cannot too warmly recommend them. To be sure, acute otorrhœa in otherwise healthy persons may disappear without particular precaution, in the same way as I saw a gentleman recover from a pneumonia which he had contracted in a snow-storm while travelling through the Rocky Mountains, but which did not deter him from continuing his four days' journey to New York. It would, however, be unpardonable if a physician were governed in his directions by such exceptional cases. All aurists warn us of the dangers of neglected otorrhœa, but they mostly dwell only on the necessity of local treatment. At the head of the treatment of otitis media purulenta, I would place the advice to consider the disease as an important and dangerous inflammation, and treat it with as much care and strictness as we treat pneumonia, iritis, and other inflammatory diseases. Let us remember only what the usual and less important consequences of neglected otitis are, viz.: chronic otorrhœa, chronic aural catarrh, thickening of the drum-head, adhesions between the different parts contained within the drum cavity—a life-long misery which might have been prevented by one week's rest at home and in bed.

A number of patients, on their own accord, or by advice of their physicians, had applied warm fomentations, or poultices, to the ear. I have examined these patients with particular attention, and find, in looking over my notes, that they all stated they obtained relief from such applications; I have not been able to convince myself, in any one of those cases, that the wet and warm applications had caused the suppuration to spread. This is heresy, I know, but fact, as far as it goes.

When the discharge suddenly diminished, and at the same time the pain in the ear and head had returned, I found decided advantage from steaming the ear, either with simple, or, if the patient preferred, with aromatic water. This caused the ear to discharge again, and relieved the pain. I obtained the happiest results from steaming in some cases in which the cerebral symptoms were so marked that an opening of the mastoid process seemed justified, and I have seen so much benefit derived from this popular mode of treatment, that I try it in every case, especially in chronic otorrhœa in which the discharge suddenly ceases, and pain, vertigo, fever and other symptoms, together with local inspection prove that the inflammation has not subsided, but rather become more intense. In the majority of cases steaming brings the discharge on again, sometimes attended with the liberation of copious cheesy, offensive masses. If steaming and leeching do not reduce the inflammation, operative treatment should not be delayed.

Though I am convinced of the appropriateness of inflation, I find in my statistics, besides many cases in which inflation, according to Politzer, immediately improved the hearing, some cases in which, if employed in the initial stage of the disease, it caused pain and temporary diminution of hearing. It is not impossible that the current of air forces mucus and pus from the tube into the drum, and from the drum into the mastoid cells; I am, therefore, very cautious in inflating the ear during acute stage of inflammation, and always use the catheter first, together with the auscultation tube. I begin the inflation with

slight pressure, increasing it gradually, while I listen through the auscultation tube. By this method one can judge better of the resistance in the tube, and the contents of the drum cavity, than by Politzer's experiment. It frequently happened that the first puffs of air through the catheter, produced mucus rales, but then the air entered in a clear and unobstructed stream. The improvement of hearing was, in most cases only moderate, but when, immediately afterward, Politzer's experiment was rigorously performed, the acuteness of hearing was considerably increased.

I have seldom resorted to the paracentesis of the membrana tympani. Though the puncture of the drum-head be a simple and harmless procedure, I use it not without a certain reluctance, probably owing to the poor results commonly obtained by paracentesis of the anterior chamber. I have practiced paracentesis of the drum only when the indications (pain, mucus rales, bulging of the membrane, etc.) were clearly pronounced. It afforded relief only when it liberated pus, and was immediately followed by otorrhœa; otherwise it increased the pain, which only subsided when, later on, suppuration set in. Much has been written about the paracentesis of the drum cavity. In the present phase of otology, this operation has become "fashionable," yet there was a time—and it has not long passed by—in which it was declared a sin of omission not to puncture the cornea when hypopyon was present. To-day no oculist performs paracentesis of the anterior chamber for the sake of removing pus, for it is known that pus in the anterior chamber is most rapidly absorbed as soon as its source has been removed. I am loth to apply conclusions by analogy from one organ to the other, but I confess that the present popularity of paracentesis of the drum cavity has not induced me to perform this operation at every opportunity.

Opening of the mastoid process was never resorted to in the series of cases under consideration. Of this operation also I am not a great admirer, and perform it only when the cerebral symptoms are threatening, especially when, at the same time, the secretion has ceased more or less suddenly, and the mastoid region is red, swollen, and tender on pressure; i. e., in cases that show some probability of retention of morbid substances in the cells of the mastoid process. I lay great stress on careful cleansing of the ear. This should be done by syringing with lukewarm water, to which a small quantity of table salt or soda may be added.

Instillations, for instance, nitrate of silver, 25 per cent., without exception, increased the inflammation and the pain.

CLINIQUE.

HERNIA AND THE CONDITIONS OF CURE.

By J. G. Gilchrist, M. D., Detroit, Mich.

In all purely surgical affections, if not in the case of *all* morbid action, an estimation of the curability of the condition, and the indications for treatment, can only be made and understood by an intelligent conception of etiology. In no condition is this more necessary than in that of hernia. Entertaining these views, it is with a sensation somewhat akin to astonishment that we read essays by distinguished medical gentlemen, in which the principle indicated is totally disregarded. Let us, for the present, consider the single subject of hernia.

If we ask the average practitioner what are the causes of hernia we shall probably be told muscular exertion or trauma of some kind. If we extend our inquiry to many of those eminent in the surgical science, the answer will be practically the same, in nine cases out of ten. If we examine our text-books, to go still farther, we are often met by the same response, which, while true to a certain and *very* limited extent, is misleading to students, and directs the attention of more experienced practitioners from matters of far greater importance.

We find that nearly all morbid processes, at least most of those which are naturally brought to the attention of the surgeon, are produced or producible through the operation of two sets of causes, viz.: the *predisposing* and the *exciting*. A moment's consideration will convince the reader that if either class is to take precedence it would naturally be the former. At this time I may simply say that this precedence is established from the fact that they indicate some natural defect or peculiarity, which makes the sufferer or those of his class more liable than others, or a different class. It seems almost impossible that any should be found denying this precedency, but, either in express terms, or impliedly from their silence, there are not a few. When we look over the literature of the subject of hernia, produced by homœopathic practitioners, we are astonished to find the predisposing causes are rarely mentioned, and oftentimes completely ignored or overlooked. Franklin, indeed, makes bare mention, but Helmuth, in his otherwise admirable work, unless I have overlooked it, does not give a single line to its consideration. It may be said the writer is equally culpable, and he pleads guilty, but it will be admitted, the edition of his treatise on *Surgical Diseases*, now deservedly out of print, was as much the production of the times as the author. In the present edition, now in press, this, and many other more glaring sins of omission and commission will be fully atoned for. After this long preamble the kernel of the nut may soon be reached.

In the last (and initiatory) number of an excellent periodical, the *Journal of Electrology and Neurology*, Dr. Miner tells us how to *cure* inguinal hernia by the galvano-cautery. One would suppose, unless he knew better, that the production of hernia was *entirely* dependent upon some injury to the inguinal canal, and that no change in the contents of the abdomen was essential. Now, I am very far from intimating that Dr. Miner is uninformed on this point, for I know that he is not. But either from inattention, or acting on the supposition that his readers are sufficiently informed already, the very material fact that alterations in the mesentery are the prime cause, at least for the continuance of hernia, is not given. Where shall our physicians go for this information, at least in our meagre literature? In fact the larger majority of the common text-books in surgery are equally defective. Now, let me state a fact, emphatically, and one which has been proved such in my own experience, over and over again. An *old* inguinal hernia can rarely, if ever, be cured by any operation, or the application of any mechanical appliances, unless one of two things are accomplished, viz.: either the use of a well-fitting truss from the beginning, or a correction of the elongated mesentery, should no truss have been worn.

It is true that the elongated mesentery is often due to simple traction; it is equally true that it is occasionally hereditary. In either case the effects are the same, and the cavity of the abdomen is not sufficient to contain its contents. The hernia is, therefore, due more to the fact that the viscera are partially augmented in size, and an outlet is sought for their accommodation, than to the existence of an opening.

When a truss has been worn from the commencement, if it be well-fitting, and there is no hereditary tendency to hernia, there may be no elongation of the mesentery. Such is the case usually in cases in which the protrusion has not occurred until after the period of adolescence, and is evidently due to traumatism. Here a truss will naturally be applied early; the her-

nia being kept up, there is no traction in the mesentery. The later appearance of the lesion will argue against its being due to hereditary malformation. These conditions are favorable to an attempt to cure by surgical treatment, and, indeed, cannot, I believe, be cured in any other manner.

On the other hand, a hernia coming on early in life, either in infancy or early childhood, either without trauma or from the inception of injury too trifling for the purpose in ordinary cases, argues a predisposition to it from structural defect, or hereditary malformation. The defect will usually be found either a preternatural elongation of the mesentery, or a potency of the vaginal process of the peritoneum. In the latter event the former malformation will naturally come on later from purely mechanical causes. Such a case will be unfavorable for surgical treatment, at least until other treatment has lessened somewhat the potency of the maintaining conditions.

Old hernias that have been neglected, or imperfectly retained, or those which, from some local conditions, cannot be retained by a truss, permit mesentery elongation to a degree forbidding any attempt at cure, by operation at least.

Now, we are ready to conceive the *conditions of cure*, and *why* operative treatment alone must always fail, or so frequently as to be the rule, when etiology is neglected. To avoid falling into the error attributed to others, we will take nothing for granted, and state that the cause of failure is, that the capacity of the abdomen is inadequate for the accommodation of the hernial mass, and one side being closed up it will appear on the other. An umbilical hernia being "cured," we may look for an inguinal. Here then are the "conditions."

1*st*. In old hernia; those that cannot be retained, from any cause; congenital hernia, or of any character that necessarily subjects the mesentery to traction; the *first* indication is to correct this elongation, if possible. The means are two-fold, medicinal and mechanical. (*a*) *Calc., Nux., Sulph., Lycop., Plumb.*, etc., have all a decided influence in this direction, and our journals, society transactions and text-books are crowded with illustrative cases; none are, therefore, needed here. (*b*) Relieve traction by the use of easy, well-fitted, light-springed trusses, to be removed at night. In very obstinate old cases it will be safer to wear a truss with a double pad, one on the opposite side to the hernia, to guard against protrusion at a new point. When the tendency to protrusion has been corrected, radical operations to close the outlet may be appropriately made.

2*d*. In recent hernia, particularly when acquired, and due to traumatic influences, operative measures may be at once resorted to.

3*d*. In *all* cases, recent or chronic, guard well, with suitable apparatus, *all* weak points where hernia might protrude, until all danger has passed.

In closing this desultory and imperfect contribution, let me give the result of fourteen operations for radical cure, in my practice.

Nature of Case.	No.	Previous Treatment.*		No Treatment.*	
		No.	Result.	No.	Result.
Congenital.. ...	9	6	cured.	3	failure.
Acquired — Recent	2		....	2	cured.
Acquired — Ancie't	3	2	cured 1.	1	failure.
Totals.	14	8	7	6	2

*Refer to medical treatment, as above, preceding the operation.

From this it will be seen that in all the cases of failure, the conditions of failure were fairly to be attributed to changes in the mesentery from traction, or heredity, and we are fully warranted in assuming that a failure to recognize that element of correction, will give unsatisfactory results, no matter *what* the operation is, or how well it may be performed.

TRAUMATIC FACIAL ERYSIPELAS, WITH METASTASIS TO THE MENINGES.

By Edgar V. Moffat, M. D.,

House Physician, Homœopathic Hospital, Ward's Island.

William Moon, æt. 37, married, English, miner by occupation, admitted Aug. 15, 1879. For the past three weeks patient has been on a heavy debauch, eating little or nothing. In a fight five days ago was kicked in the left eye, rupturing the sclerotica just behind the insertion of the cornea on the outer side of the ball, evacuating the aqueous humor, so that the anterior chamber is collapsed and sight entirely gone. Further details of the lesion we could not ascertain. In this condition he traveled from Philadelphia.

Two days previous to his admittance erysipelas appeared about the affected eye. We found him suffering great pain in and around the eye; redness and swelling extended down the cheek, neck, and across to the opposite side of the face, so that both eyes were closed. The entire surface was hard and studded with numerous small bullæ, containing serum.

The pain was sharp, but heat, itching and tension predominated. Patient weak, very restless, and thirsty. Temp. 105⅘°; pulse 70, full and soft; ℞. *Acon.* 1, half-hourly.

In three hours (that is, about 7 P. M.) no abatement of the fever had appeared, and as Verat. vir. seemed contra-indicated by the slow, soft, full pulse, *Rhus tox.* was administered every two hours, and a lotion of *Rhus* ʒ ij., water ʒ xvi., applied to the face.

Aug. 16, 9 A. M. Temp. 103°, pulse 80, pain in the face somewhat better.

—— 7 P. M. Temp 105°, pulse 80, ℞ same.

Aug 17, 9 A. M. Temp. 102°, feels easier, ℞ continued.

Aug. 18. General improvement: bullæ fewer and larger; right eye could be opened to its full extent; pains less; ℞ and application continued.

Aug. 20, A. M. Swelling and redness rapidly diminishing; bullæ fast drying up.

—— P. M. Pain, itching, and swelling continued to disappear. Left eye could be opened wide; bullæ nearly reduced to scabs. Patient yet weak, and appetite poor. While the eyes were open the mind was clear; but on closing them patient imagined he saw people standing by the bed and walking around him. He talked more readily; complained of a profuse, gushing, watery diarrhœa, which was frequent, debilitating, and painless. ℞.: *Podoph.* 3x, and lotion discontinued.

Aug. 21. Diarrhœa very much better. Temp. 105°; pulse full and soft at 110. Delirium more pronounced, but still mild and very loquacious. ℞, *Stram.*

Aug. 22. General condition about the same; delirium continued, but in a milder form.

—— P. M. About 3 P. M., patient began to grow excited; believed we were trying to murder him, and cut up his body, and occasionally endeavored to spring out of bed and escape. The delirium increased in violence up to 11 P. M., when it became necessary to have an attendant constantly near, to prevent his

jumping from the window. He seemed at times in an agony of fright, screaming "murder!" at the top of his voice; again, he would whimper and cry, or burst into laughter. The eyes, or rather the right eye, was bright, and the pupil but slightly dilated. He was constantly trying to uncover himself and get up. R.: *Hyos.* gtt. v., *aquæ* ʒjj.; teaspoonful half hourly—which, by 2 A. M., had quieted him.

Aug. 23. Still delirious, but mildly so; he continued in his delusion as to our trying to kill him, but only whimpered and protested, in a more quiet way. He would become rational at intervals, when he complained of pain and dryness in the throat. Right eye injected, face red and hot, though not swollen. R., *Bell.*

Aug. 24. Still some delirium, but not so marked. Respiration slow, pulse 55; patient very weak; appetite entirely gone. Erysipelas appeared, returning to the left side of the face. R., *Bell.* 1 hourly, and R., *Spts. frumenti, Aquæ*, aa. ʒj.; *S.* teaspoonful half-hourly.

Aug. 25. Patient almost entirely rational. Erysipelas was more marked, the face being hot, red, and shining. Temp. 105°. pulse feeble and slow. R. and stimulants continued.

Aug. 26. Temp 103°. Face appeared about the same, appetite improving, the mind entirely clear.

Aug. 27. The erysipelas improving, patient much stronger. R. same.

Aug. 28. Face was not so red, but considerable œdema appeared beneath the affected eye, with stinging pains in the cheek. Patient was thirstless and drowsy. R., *Apis*, and discontinued stimulants.

Aug. 29. Erysipelas better. R., same.

Aug. 30th. General improvement, the inflammation had nearly disappeared. R. continued.

Sept. 1. Appetite good, bowels regular, felt much stronger.

Sept. 4. The erysipelas has completely subsided. There was a good deal of pain and lachrymation in the injured eye, which was atrophied. Pain and irritation were becoming slightly manifest in the sound eye when he was transferred to the Ophthalmic Ward.

Sept. 5. Patient remained one night in the Ward, and in the morning suddenly determined to go to New Haven. Argument, protest, and a fair warning of the dangers of sympathetic opthalmia, were all useless, and he left the Hospital, cured at least of his erysipelas.

In this case it is interesting to note the concurrence of a temperature of 105 3-5°, with a soft pulse of 70, and we would suggest the query: Is it possible that a lotion of the apparently homœopathic remedy, so dilute as 1.64, could so suppress the disease as to produce the metastasis, especially as the medicine was at the same time administered internally?.

FOREIGN BODY IN THE EAR.

Reported by C. L. Bagg, M.D., House Physician, Homœopathic Hospital, W. I.

Mary B., aged 48, while on night duty, September 3d, at about 3 A. M., felt something like an insect enter her right ear, which caused a great deal of uneasiness and pain. She attempted to remove it with a long hairpin, but being unsuccessful came to the doctor about 9 A. M., when a mixture of ether and olive oil was dropped into the ear in the hope of killing any living thing that might be in the ear, and also of relieving the pain, which at times was very severe. She returned again in the afternoon, saying she was no better, and that she could still feel something moving, the pain having in the meanwhile increased.

Upon examination with the otoscope, the meatus auditorius externus seemed perfectly clean and sound; the membrana tympani could be distinctly seen beyond, clear and bright, nothing intervening between it and the eye of the observer. At the lower portion of the membrane there seemed to be a small bright clot of blood. As the woman had been using a hairpin in the ear, it was concluded that this must be a clot resulting from some abrasion. Syringing out the ear carefully, and again examining it, the same appearance was presented, and we began to think the presence of an insect to be out of the question; but the patient was constantly saying "I feel it moving," at which times the pain seemed to be increased. We therefore concluded to make one more attempt before leaving it.

Pulling up the pinna of the ear so as to straighten the canal, a stream of water was thrown forcibly upward and backward, so that it would turn and wash out on the floor of the passage. To our surprise and satisfaction we washed out a black beetle one quarter of an inch long and still alive! Again looking into the ear, the clot had vanished, evidently being the head and thorax of the beetle, which was very black and shining, and by reflected light assumed the appearance of blood. The query was, Where could the rest of the body have been, unless it lay in the little depression at the base of the membrana tympani in such a way as to conceal all but its head, which lay up against the membrane?

The pain was at once relieved, but for a day or two afterward a feeling of soreness remained, which was removed by Arnica 3c.

A SUBSTITUTE FOR THE SPONGE IN SURGICAL PRACTICE.

By M. O. Terry, M. D.

The risk one runs in using a sponge the second time in cleansing suppurating wounds, especially during warm weather, unless the most careful antiseptic precautions are taken; the liability of contaminating the second patient, provided the first should have had some constitutional disorder, as syphilis, and the expense of the sponge makes an innovation desirable, if the substitute answers the purpose for which the other is used.

Absorbent Botton is cheap and clean from the beginning. When the sponge is filled with sand, which, if not thoroughly removed before using, may, in case of clean cut wounds or injuries, when, with proper dressing they will heal by the first intention, prevent their so doing by depositing sand in them. It need not be used a second time, and it fills and expands readily in water.

Malt Extracts have become a most important article in the diet of the sick, and physicians have come to regard them as almost indispensable in cases in which malassimilation predominates. Messrs. Fairchild Bros. have succeeded in making a "Jelly" containing over ninety per cent. of the extract, which they supply either simple or in combination with cod liver oil, etc., which has the advantage of *not being sweet and syrupy*, as is the case with other preparations of malt, thus overcoming an objection which has prohibited their use in cases in which sweets disagree. We have prescribed this preparation in a great number of cases of nervous prostration, inanition, etc., with decided benefit, and we consider it a great addition to our *dietary armamentarium*, especially as it covers those cases which otherwise would be compelled to do without malt.

The Homœopathic Times.

A MONTHLY JOURNAL
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Editors:

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"*A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and* OUGHT *to be the* ONLY ACKNOWLEDGED RIGHT *of an individual to the exercise and honors of his profession.*"—Code of Medical Ethics, Amer. Med. Ass., Art. iv., Sec. 1.

ROUTINE PRACTICE.

The temptation to go through the world as easily as possible is so strong that we are very apt to get into the habit of prescribing on general principles rather than from a careful individualization of cases. "General principles" is a very good help in making out our prescription, but we should never forget that inasmuch as no two cases are precisely alike, each case should be closely studied by itself, and the prescription carefully adapted to meet the peculiar condition of temperament and disease. There is danger, on the contrary, of paying so much attention to delicate shades of symptoms that the mind becomes confused and loses its hold of those strong points which should ever be like landmarks to the physician —both in his diagnosis and treatment. In avoiding Scylla we should be careful not to run into Charybdis, but steering clear of both extremes keep in the deep waters of honest scientific investigation and prescription.

In the meetings of our medical societies, papers and discussions not unfrequently show on the one side a lack of a proper and scientific individualization of cases, an absence of that careful grouping of facts with their bearings one upon another, that close analysis so essential in making up a correct diagnosis, and a skillful treatment; on the other side there is a tendency to linger over every minute shade of symptom, giving it an importance of which it is by no means worthy. At a recent meeting of the County Society a paper was read by one of its oldest and most intelligent members, strongly recommending in *every* case of labor at the commencement of the third stage the administration of a teaspoon of the *fluid extract of Ergot* to produce contraction of the womb after the birth of the child, and thereby prevent post-partum hemorrhage. Since he had adopted this course not a single case of post-partum hemorrhage had occurred in his practice, and he no longer had any dread of this fearful, and sometimes fatal trouble. This is reasoning from about the same principle as the father who availed himself of a rainy day when he had plenty of time to take his children into the barn and whip them all round on the ground of inherent natural depravity, and if they did not deserve the whip then, they might some other time.

There is no doubt but *fluid extract of Ergot* is a most efficient remedy in controlling uterine hemorrhage, but surely there should be some discrimination in its use. Post-partum hemorrhage is not of very frequent occurrence, and in nine cases out of ten the watchful physician can tell by the course of labor, by the condition of his patient, whether Ergot will be needed to hold the womb in contraction after the birth of the child. Why crowd the system with powerful drugs in ten cases when they are only needed in one?

We are not, by any means, opposed to the use of *Ergot* at the proper time, but we are decidedly opposed to an interference with nature when not needed; to the administration of powerful drugs, unless the condition of the patient strongly points to their use. What we object to is that routine practice which on the one side would prescribe in all cases, without discrimination the same line of treatment, and on the other, leave everything to nature, on the ground that nature, in the majority of cases, is able to take care of herself. The physician's business is to determine when help is needed, and then give it promptly and efficiently.

The skillful pilot, understanding the power of his engine, watching the currents and the force of the wind, and taking advantage of all, brings his boat easily and quickly to the dock. But to do this requires not only skilled intelligence, but a cool head and steady hand. The physician pilots a priceless vessel, but not always with the skill and tact of the engineer. The human vessel goes down in the dark waters often, because the pilot has failed to husband its resources, and has permitted it to be wrecked when a little skillful guidance would have saved all. With all the appliance of science at hand, the physician has no right to allow his patient to toil on in the agony of labor until completely exhausted. After the first stage is over or well advanced, and the progress is so slow that the strength of the patient will probably give way before labor is consummated, *Ergot* in liberal doses will not unfrequently aid in completing the work with safety to the mother and child. But here the skilled eye of the physician should closely watch his patient. *Ergot* is sometimes uncertain, and its prolonged action often dangerous, and if the drug fails in prompt and efficient work, the forceps should speedily be intro-

duced to finish the case. Dr. Minton, the accomplished editor of the *Obstetrical Magazine*, says in an able editorial: "Suffering woman has a right to demand of us the use of the forceps as those frequently do who have once experienced their harmless and efficient aid, and the physician who, from fear or ignorance, refuses her this aid is unfit for the high calling of an accoucheur. Frequently we but mock her when we gave her a few globules of medicine and a large amount of advice, urge her to hold her breath, to redouble her efforts and exert herself to the utmost, while we sit by and calmly contemplate her throes of agony and make no effort ourselves to assist her." In all cases what we wish to guard against is, not only that routine practice which leads to a meddlesome interference on the part of some, a culpable waiting on the part of others for something to turn up, but the refinement of diagnosis which fritters away everything in non essentials instead of striking boldly and firmly at the heart of the malady.

PHENOMENAL.

The following intelligent account from the *Daily Times* shows the kind of material upon which the superstitiously inclined build their *faith* in the miraculous. It is upon such *data* that we are invited and expected—if we would avoid sacrilege—to lend our countenance. There is no record of any other than some similar case which has been *miraculously* cured, and we have yet to learn of the actual reproduction of tissue in any such manner, or even from the adoption of Prof. Tyndall's proposed "prayer guage."

The offices of faith and prayer are but illy understood by the masses, and occurrences like the following only tend to confirm and perpetuate a superstition which has no foundation in fact, but lives by unauthenticated assertion alone!

Any physician who has to do with insane patients knows that "religious melancholia" is not only one of the most frequent phases to be met with, but the cases in which it exists are the most intractable. Many are the pitiful cases we could recount which have been induced by religious excitement, by too constant study of *theological* subjects, and we question whether the time will not come when political economists will urge upon the Commonwealth the importance of adopting some means to regulate an exercise which seems to be filling its asylums with hopeless cases, which may become a burden upon it.

We quote this case more for the purpose of preserving its historical record than for any medical value it may contain:

"About the middle of last June a poor Irishman named Davin, living at No. 170 Clinton Street, Hoboken, called at Dr. Saltonstall's office and requested him to pay a visit to his wife, who had been seized with violent vomiting and purging. Mrs. Davin recovered rapidly under his treatment. She is described as a slender and delicate woman, of Irish parentage, 28 years of age, but looking 10 years older; hair abundantly streaked with gray; insufficiently nourished, and of feeble constitution. Dr. Saltonstall heard no more of Mrs. Davin and her troubles until the last of July, when her husband again solicited his services, saying that his wife had been prostrated by the heat, and required immediate attention. The physician found the woman very sick and nervous, with all the symptoms of prostration from high temperature fully developed. On the first day of August he paid six visits to his patient, so critical did he consider the case, and from that date to the middle of the month he called at least once every day. About this latter period the symptoms of prostration began to disappear rapidly; but a new series of still more alarming symptoms supervened. The latter commenced with loss of voice (aphonia), and went rapidly on to complete paralysis of the lower limbs, with such entire extinction of sensibility that the foot could be punctured to the bone with a needle without provoking the slightest reflex action. At the same time there was a corresponding extinction of motor function, and the poor woman lay helpless in her bed, or sat musing by the window, with the prospect of becoming a life-long burden to her husband.

"Curiously enough, as the paralysis of the limbs progressed, the aphonia subsided, and, what is equally suggestive, there was no perceptible wasting of the apparently palsied muscular structures. Medical treatment having proved unavailing for several weeks, Dr. Saltonstall finally advised the removal of Mrs. Davin to the County Hospital, with a view to test the virtue of electricity. The paralysis terminated abruptly at the hips, and did not appear to indicate structural disease of the spinal cord.

"Dr. Saltonstall urged removal to the hospital with such persistence that Mrs. Davin finally consented to be taken there if she did not recover within a certain time, and then announced her intention of going to the monastery to give Father Victor a trial. Accordingly, a little more than two weeks ago, a grocer's wagon was procured, and Mrs. Davin was taken to West Hoboken. From this date medical treatment ceased, and the issue of the case was left in the hands of the monks. It was near noon one Saturday when the patient was removed from the rude ambulence and carried into the presence of Father Victor, who immediately commenced the form of ritual incident to such occasions, standing by the altar with the relic in his hand—the famous bone of St. Vincent de Paul, inclosed in a glass case to preserve it from the profaning contact of the external air. After praying for some minutes the reverend Father rubbed the patient's limbs with the relic, and finally dismissed her with the comforting assurance that in nine days she would commence to get better. Mrs. Davin returned to her humble home in Clinton Street comforted in mind, and on the fifteenth day after Father Victor's manipulation, having had no medical treatment in the meantime, walked into Dr. Saltonstall's office and told her story. The day after her return from the monastery she was able to move her toes, although with extreme difficulty, and partial sensibility returned to her feet. From this beginning, day by day the paralysis gradually departed, until, on the ninth, she was able to walk about her room. Mrs. Davin told the doctor that she had previously had two similar

attacks of paralysis—one when only 21 years old, and the other some three years ago. Both commenced with loss of voice, went on to transitory facial paralysis, and terminated in settled palsy of the lower limbs, which was finally cured by Father Victor. She believes that her faith was the instrument of her healing.

"Extraordinary as this case seems when viewed apart from its causal relations, to the trained expert in nervous diseases it presents itself in the light of a simple case of transitory paralysis contingent upon hysteria. The loss of voice, the transitory facial paralysis, and the final loss of motion and sensibility in the lower limbs, are the several members of a succession of phenomena with which experienced practitioners are familiar, and of which medical annals supply abundant cases. Spontaneous cure under stress of religious emotion or sudden terror, when the patient has lain helpless for months, is one of the extraordinary things associated with hysterical palsy, and it is of such materials that our nineteenth century miracles are composed."

A MEDICAL UTOPIA.

The *Western Lancet* says, "Philadelphia bears the enviable reputation of being less infested with charlatans and irregulars than any other large city. * * * It is refreshing to hear that there at least is one city where the common sense of the people arrays itself against the evil of quackery, and where, if report speaks true, homœopathy is drawing its last breath."

In *this* city we find many charlatans and irregulars in the ranks of the so-called "Regular" or "Old School"; and if modes of practice have anything to do in making "irregulars," certainly the epithet will apply to the majority of "Old School" empiricists, whose therapeutics are still a jargon of unscientific generalization.

The statement regarding homœopathy is absolutely *false*, as statistics will show. There are at present about 250 practitioners of homœopathy in Philadelphia, to which the number has gradually and steadily increased since its first introduction there. Hahnemann College, of that city, was never in so prosperous a condition. With a faculty second to none, and a class of 200 students, it does not look much as if "*homœopathy is drawing its last breath!*" And this prosperity is due to the "*common sense of the people.*"

No, gentlemen; you never can put down the principle upon which homœopathy depends, by misrepresentation and downright *lying*. The name will continue so long as the necessity for it exists; until its principles and practice—the mode of selecting the remedy and the minimum dose—has been acknowledged by the majority of the practitioners of medicine, as is rapidly being done. Then there will be no occasion to continue it as a distinctive name, and all practitioners will be glad to adopt the simple title of "physician."

"HOMŒOPATHY VS. MATERIALISM."

A FEW QUESTIONS ADDRESSED TO "E. N. E."

By an Inquirer.

In the September number of the Homœopathic Times, speaking of the theory of "dynamization" of drugs, you say—"After all that has been written against this theory, we are just as far from having its truth disproved as at the morning of its birth."

1. Do you not know that the *onus probandi* lies on the other side?

In the sciences, and among scholars accustomed to some exactitude of thought and action, are principles accepted as sound and sufficient to guide the efforts of art, upon the dicta of *theorists?*

If a man tells the American Association for the Advancement of Science, that "the moon is made of green cheese," are the members of that learned body to accept his theory, and place it prominently in their text-books on Astronomy until it is *disproved?*

Who has tried to *disprove* dynamization? Those you call "materialists," do they not rather claim that it has never been adequately *proved?*

Why should they undertake to disprove a gratuitous assumption?

2. You say—"It is maintained by materialists, that when a drug has reached a potency beyond which none of the crude drug can in any way be discovered, either chemically or microscopically, the solution or trituration is nothing but the menstruum used for attenuating."

Will you please name the "materialist" who has maintained such an opinion?

Are you sure that men of that class deny all the proofs of drug presence furnished by pathogenesy and therapeutics?

3. Again, speaking of "materialists," you say—"Such men should entirely discard the law of similars, actually as they do virtually."

Was the law of similars discovered and successfully applied in medical practice before or after the "birth" of the theory of "dynamization?"

How old was Homœopathy when Hahnemann began the use of attenuations, in which the "materialist" could not recognize the presence of drug matter?

What proportion of homœopathic physicians, in Europe, England and the United States, declare that they have found the attenuations used by Hahnemann during the first twenty-five years of his homœopathic practice, *sufficiently high* for all practical purposes?

Did Hahnemann then, and do they now "*virtually* discard the law of similars?"

4. You say—"We homœopathists are told that we are professional frauds; that nothing above the 5th or 6th potency will cure.

Why? "Because above this no trace of the crude drug can be found."

Again I ask you to name those who have thus stigmatized you.

Who says no trace of the drug can be found above the "5th or 6th potency?"

5. And you say—"Some of these sceptics even attempt the unnecessary task of computing the number of miles the diameter of a globe must be to contain one grain of *crude matter* in a moderately high potency."

Why is such a task "unnecessary" if a truthful representation of the matter is made in figures?

Who denies the correctness of the calculations made by such "sceptics?"

If they do not *falsify* the facts, who is aggrieved, and why make a fuss?

Are we to be afraid of facts, however stubborn and ugly they may appear?

6. You present the magnetic theory of cure as discussed by Dr. Deschere not long ago, and seem to think

that the polarity of the "dynamized" drug restores the disturbed polarity of the secreting and excreting cells of the organism, etc.

Allow me to ask in what the polarity resides, or rather, what is it that possesses the *restorative polarity?*

If no drug molecules are present, what is the medicinal magnet?

Can there be *polarity* without a substance; a body having length, breadth and thickness?

How have you gotten clear, then, of "materialism."

7. You say—"Materialism must needs have a reason for every result discovered."

If "materialists" require the *rationale* of results, do you, on the other hand, "go it blind?" Do you, as a spiritualist in medicine, disregard the relation of cause and effect? Does faith take the place of knowledge with you?

Whence comes the faith?

8. You speak of an experimenter in Philadelphia tasting a bowl of oyster soup in New York, by means of a wire charged with electricity.

Your story being true, please tell me if the soup be potentized by Finke to the c. m. centesimal, will the experimenter in Philadelphia taste the oysters?

With your willingness to ignore all difficulties, and your abounding faith, can you doubt it?.

In conclusion allow me to ask you if in your spiritual philosophy it is the right thing to misrepresent the views of those with whom you cannot agree?

When you complain of your sceptical brother because he represents the fractional part of a grain of medicine, possible in your attenuated dose, by a long row of figures, the correctness of which you cannot at all deny, why do you perpetually and falsely accuse him of "virtually discarding the law of similars," while he is, year in and year out, daily and hourly curing the sick *homœopathically* with his more sensible doses?

Is it fair and honest in you to claim allegiance to the law of *similars* when you employ drugs so "potentized" that they are no longer *similar* to the morbific influence, but actually OPPOSED to it?

Do you believe in consistency?

BIBLIOGRAPHICAL.

HOMŒOPATHIC THERAPEUTICS: SECOND, REVISED AND ENLARGED EDITION. By S. Lilienthal, M. D. Boericke & Tafel, 1879.

The work before us is based upon "Jahr's Clinical Guide" as a nucleus—which was formerly translated into English by the author of the present volume—with copious additions, especially of the "new remedies," by the author, which adds largely to its usefulness and value, and is a great improvement over the original of Jahr.

The opportunity for the edition was made possible by the late fire which destroyed the bulk of the first.

On page 39, line 19, we read *tart.*, which may mean any one of several preparations. In the author's translation of "Jahr" the same abbreviation also occurs, so that we presume it to be a literal translation of the original text.

It ought not to be left to the reader to guess what *ant.* means, for the addition of a single letter would indicate exactly what is intended, and leave no room for mistake or guess-work.

For students and such as are not thoroughly familiar with *materia medica*, such abbreviations are dangerous guide-posts (?), and should have been changed by the author in issuing the work as his own.

We should like the work better if the spelling of the name of each drug in the context were commenced in capitals; they are pleasanter to the eye and less tedious to read.

We miss from the article on *Asthenopia* some well-tried friends, such as especially *Gelsem.*, which has proved itself one of our best in this affection, as the results of clinical experience based upon "provings" have often demonstrated.

In the next edition *Diplopia* ought to be brought under this chapter.

The section on *Cataract* might just as well have been omitted, for who ever heard of a well-authenticated *cure* of this affection with any remedy?

We will admit that our literature abounds in unfounded assertions—statements which any specialist in this department knows to be unreliable and useless—which has done much to gain for us the opprobrium of the "Old School" on account of their improbability.

For *Cataract* we find recommended "*Bell.*, after an acute inflammation of the eye" (!) a condition having no connection whatever with this affection, and a remedy not at all related to the pathological condition upon which it depends.

In all the criticisms upon the use of *Atropine*, it has never been suggested as a possible cause of Cataract, and as it has been largely employed these many years, and in some cases in immense doses for protracted periods, we think it safe in asserting that *Bell.*, or its alkaloid, never has caused and never can cure Cataract.

Ergot is a drug that has produced cataractus degeneration of the lens, but no mention whatever is made of it here as a curative agent.

The indication for the use of *Caust* is not one that would suggest a probable case of cataract. "Constant inclination to touch and rub the eye, which seems to relieve a pressure upon it," looks more like some form of conjunctivitis than anything else. Again, "*Sepia*, when dependent upon uterine disorders and climaxis." We have known uterine disorders at the climaxis to be relieved by this remedy, but have never heard of a single case of well-authenticated cataract to be cured, or the vision, in such cases, in the least improved by its administration.

The trouble is that our literature is decidedly mixed in respect to this affection. Cases of macula cornæ have been diagnosticated by the general practitioner as cataract, and as they frequently clear up, even without medication at all, an unwarranted credit has thus been accorded to remedial agents, a grave error committed, and expectations aroused which the facts will not bear out, with the result of disappointment and failure!

This is one of the reasons why text-books should not be constructed by a single individual who is not supposed to be familiar with all the specialties in medicine, and hence unable to judge of therapeutic probabilities.

The books we want are those which, like *Ziemssen*, are edited by *specialists* in the particular departments, and then we have a right to expect something to be depended upon.

Some chapters are admirably worked up, for instance the ones devoted to *Cough*, *Diarrhœa*, *Dysentery*, *Diphtheria*, *Headaches*, *Heart Diseases*, *Leucorrhœa*, *Dysmenorrhœa*, *Insanity*, *Ophthalmia*, and others.

The indications are concisely and clearly stated, and one can scarcely fail to find the remedy, providing the case has been properly diagnosticated. (We mean by this, a perfect picture which is only accorded by the totality of the symptoms.)

The chapter on *Fevers* is, perhaps the best in the book, and worth the price asked for the whole. The divisions are excellent, and the indications most useful. The same comment can be made in respect to *Hæmorrhages*.

The section under *Keratitis* has already been included in "inflammation of the cornea," and should be omitted, to economize space and avoid complication.

We do not know from what data *Apomorphine* is italicized in *Sea-sickness*. Like *Amyl nitrit.*, it has had its day, and utterly failed as a curative remedy in most cases.

The provings upon which it is theoretically based were made with hypodermic injections, and we fail to see the symptoms produced—excepting the nausea—which are similar in any degree to those manifested in this affection. It would be better to place an interrogation point after it for the present, and instigate provings in the regular way, then we shall find out positively its proper relationship to disease, for we already have enough remedies theoretically recommended.

The physical part of the work is absolutely faultless, and great credit is due Messrs. Boericke & Tafel for the enterprise and faithfulness which could make such a possibility.

The general arrangement, the mode of emphasizing characteristic symptoms, is convenient, usable and striking.

The index is of little account, and, perhaps, even unnecessary at all, in consequence of the alphabetical arrangement of the subjects treated.

"Scratches" of a Surgeon. By Wm. Tod Helmuth, M. D. Chicago: Wm. A. Chatterton & Co.

The fountain of youth consists, after all, in the faculty of never getting rusty and never growing old. The fountain is in one's own soul, and he who never permits it to be crusted over, but, notwithstanding the flight of years, bubbles up bright and sparkling, only adds with increasing years a ripened experience to perpetual youth. The brightest intellects have ever been the most versatile in their accomplishments, and keep up strength for vigorous intellectual work by the rest obtained from the wide range of their studies and their keen enjoyment of life in its varied phases. Our friend Helmuth sees with a clearer eye, and is a better surgeon for being a wit, a scholar, and a poet. The little volume of rhymes, poetry, and odd conceits, which Dr. Helmuth sends out as some of the offsprings of his leisure hours, does credit to the father, and will be read with interest by all, who know the witty and accomplished surgeon, professor, and author.

Analysis of the Urine, with Special Reference to Diseases of the Genito-Urinary Organs. By K. B. Hoffman, Professor in the University of Gratz, and R. Ultzman, Docent in the University of Vienna. Translated by T. Barton Brune, A. M., M. D, and H. Holbrook Curtis, Ph. B. New York: D. Appleton & Co. 1879.

This work will not take the place of exhaustive treatises on the genito-urinary organs, but will be of especial value to the student and active practitioner, who will find here all that is really necessary for the analysis of urine and the diagnosis of urinary diseases, so far as they can be diagnosed by an understanding of the urine. It is less a text book than a work of daily reference, constantly refreshing the memory upon those minute matters, which are so easily forgotten. The typography and general appearance of the book are exceedingly creditable to the publishers.

Materia Medica and Therapeutics—Vegetable Kingdom. By Charles D F. Phillips, M. D., F. R. C. S. E., Lecturer on Materia Medica, Westminster Hospital, London. Edited and adapted to the United States Pharmacopœia, by Henry C. Biffard, A. M., M. D. New York: Wm. Wood & Co. 1879.

This work forms one of the series of Wood's Library of Standard Medical Authors. In discussing the different drugs: 1st, the active ingredients are given; 2d, physiological action; 3d, therapeutic action; 4th, proportion and dose.

The general idea of the work is excellent, and if properly carried out would meet the wants of the profession more fully than any work on Materia Medica yet published. The portion devoted to therapeutics, however, fails to do justice to the subject. It lacks fullness and point, and presents few of those clear, strong pictures so essential in studying drug action and drug indications.

A Clinical Assistant: Being Reliable Gleanings from Practice. By H. W. Nelson, M. D., F. R., C. S. I. Chicago: Duncan Brothers, Publishers.

This little pocket volume is evidently the work of a careful student and close observer. It can almost be carried in the vest pocket, and will prove of real assistance to the physician's memory.

Hempel's Materia Medica.

We are glad to see by the announcement in the *Medical Counsellor* that W. A. Chatterton, Chicago, is about to issue a third edition of Hempel's Materia Medica. The venerable author has associated with himself, in the revision of the book and bringing it up to the present time, Dr. H. R. Arndt, a ripe and painstaking scholar, fully competent for the work he has to perform. The general plan of Hempel's Materia Medica is, in our estimation, the best of any yet worked into form. With a careful revision, in which some of the philosophy and theorizing shall be left out, and the work brought up to the times, it will form the best treatise on Materia Medica yet presented to the public. We wish the publishers ample success in their undertaking.

THE CHOICE OF DOSES IN HOMŒOPATHY.

By Dr. Jousset.

(Read before the International Homœopathic Congress, at Paris, Aug. 12th, 1878.)

Translated by Geo. Vandenhoff, Jr., M.D.

The most controverted question at the present time, among homœopathic physicians, is assuredly that of the choice of doses in medicines. Let us cast a rapid glance over the history of this question, and pause at the point it has reached to-day.

After an initial epoch, during which Hahnemann employed medicines in medium doses, came a second, much longer, and in which our master attained the highest point of glory and authority. This second epoch was characterized by the use of more and more infinitesimal doses, and it is this method which is, so to speak, the last word and testament of the great reformer.

But a re-action against the exclusive use of infinitesimal doses sprang up even during Hahnemann's lifetime. The decimal dilutions were discovered, and an important group of homœopaths attached themselves to the exclusive employment of ponderable doses—the first decimal dilutions and substances not diluted at all.

Between these two schools, excessively and equally exclusive, arises a mixed school which declares that medicines act *in all doses*, and which seeks to establish certain rules for the choice of the dose. This school, which prescribes in certain fixed cases, *Lycopodium*, *Silicea*, *Copper*, *Nux vomica*, in the 20th, and even in the 200th dilution, employs without hesitation, in other cases equally fixed, *sulphate of quinine*, *iron*, *iodide of potash*, *mercury*, in doses expressed in centigrammes and even in grammes.

It is precisely this mixed school which needs to elucidate the problem which is the subject of this paper. Among the extreme infinitesimalists, as among the physicians who give only ponderable doses, there is no question on this point; the very statements of their system reply to all such difficulties. Meanwhile, if both schools sometimes cure, both schools too often

fail, and it is exactly this that we ought to demonstrate before going further. If either one or the other of the excessive schools succeeded in always curing, we should have nothing left to do but to rally to that school.

INSUFFICIENCY OF THE THEORY OF THE PURE INFINITESIMALIST.

Hahnemann endeavored to explain the partial want of success of infinitesimal doses, and from this need of explanation came the idea of *psora*; but this theory is insufficient, and there are cases which resist anti psoric remedies. To-day the pure infinitesimalists affirm that if any medicine does not act in an infinitesimal dose, it is because it has been *badly chosen*. This is a convenient argument, and one that consists in habitually treating one's adversaries as being either very ignorant or very lazy.

To this argument I will oppose a simple anecdote, but which has an instructive side. A certain great lady of Spain, afflicted with an intermittent facial neuralgia, was treated without success, during a whole year, by a most distinguished physician—one of the purest of homœopaths. Was it *psora* that caused this want of success? It could not have been the bad choice of remedies, for the length of treatment and the acknowledged merit of the physician will not permit this supposition. Well, this lady, coming to Paris, was cured in eight days by a few grammes of *Sulphate of quinine*.

Have I not seen victims of heart disease arrive at asystolia, abandon homœopathy, which had been powerless to relieve them by infinitesimal doses, and receive, if not a perfect cure, at least a considerable amelioration, by using *Digitalis* in ponderable doses?

Has not Rogers, cited by Richard Hughes, affirmed that the repugnance of certain homœopaths to the use of ponderable doses of *Sulphate of quinine*, in cases of intermittent fever, hurt our doctrine in various localities, and supported his affirmation by our own statistics?

In diarrhœas amenable to *Arsenic*, to *Phosphoric Acid*, to *Bismuth* and to *Rhubarb*, I have arrived, by successive trials, at the conclusion that low triturations and ponderable doses act more surely than high dilutions. I am glad to be able to refer to the testimony on this point of Dr. Allen (Review of American Journals, by Dr. Keghel, in the Belgian Homœopathic Review, June number), who, after vainly giving the 30th and the 200th dilution of *Arsenic* in a case of diarrhœa, succeeded with the third trituration of the same medicine.

Tobacco, which is a remedy so strongly indicated in vertigo accompanied with vomiting (vertigo a stomacho læso, vertigo of Meniere), should often be prescribed in low dilution, the third or even the first. M. the Marquis of M—— comes to consult me for a vertigo of this kind, which had troubled him for several years. His physician believed him to have an affection of the stomach, as the vomitings were frequent and he was considerably emaciated. *Tobacco* lessened the frequency of the attacks, and finally cured him, but I was obliged to descend from the third dilution to the first; the twelfth and the thirtieth dilutions produced no effect on this malady.

Ganglionic enlargements, which yield so readily to a few drops of tincture of *Belladonna*, resist indefinitely the higher dilutions of the same remedy.

Iron in chlorosis, *Mercury* and *Iodide of potassium* in syphilis, *Sulphate of quinine* in intermittent fevers, should, according to the experience of the generality of homœopaths, be prescribed in substance.

INSUFFICIENCY OF THE THEORY OF THE EXCLUSIVE PARTISANS OF PONDERABLE DOSES.

One might, in the first place, hold up to these exclusives of another kind, the brilliant success of the early homœopaths, who were all, or nearly all, infinitesimalists, and this argument, drawn from the practice of a great number of physicians, has an incontestable value; but we have more direct arguments to oppose them with.

I have experimented a great number of times on the value of doses, following the ascending ladder of the dilutions, and I have found that, in certain fixed cases, infinitesimal doses had a decided superiority. For example, the twelfth and thirtieth dilutions of *Nux vomica* have a much more sure action in neuralgia and in certain affections of the stomach, than the low dilutions and the tincture itself; the same may be said of *Silicea* in scrofulous affections, of *Lycopodium* in constipation, of *Copper* in cramps, of *Sulphur* in consumption, etc., etc. I have noticed that the partisans of the habitual use of low dilutions and ponderable doses, like Richard Hughes, recommend *Sulphur* in the twelfth and thirtieth, evident proof that their practice has led them to recognize the superiority of infinitesimal doses in certain cases.

If the pure infinitesimalist and the partisans of only ponderate doses are both, in their exclusiveness, equally at a loss when face to face with a great number of morbid conditions, shall we find a more perfect solution in some one of the intermediate sects? I do not think so. Shall we attach ourselves to those physicians who, practicing the adage: *in medio stat virtus*, represent the school of moderation, and always prescribe the sixth dilution? Evidently not; this would deprive us at once of the services and advantages of the high potencies. Shall we let ourselves be led away by those who say: "But medicines cure in all doses; witness the success of the two opposing schools, witness our own works on *Drosera*, which show that this remedy cures the capricious cough that belongs to it, in the thirtieth dilution, and in the mother tincture"? The great question, say these physicians, is the choice of the *remedy*; the *dose* is unimportant. Of what use is it to seek the solution of a problem that at this time seems insoluble? Let each one, following his temperament and his caprice, prescribe the thirtieth dilutions or the mother tinctures.

We must admit at once that there is something of truth in this system, and it is certain that there are medicines which, in fixed cases, act in all doses. But it is also certain that even for these medicines there is always a preferable dose, and it is still more certain, as we have already shown, that there are cases which resist infinitesimal doses, as there are others which absolutely rebel against ponderable doses. The question rests here, then, and we shall try to give it a solution.

I believe that it is the study of the action of medicine on the healthy man that will give us the solution that we seek.

The works on materia medica by Hahnemann and his pupils show that all medicines produce, on the healthy man, two species of actions, and that these actions are contrary. Thus, all medicine that, by its primitive action, augments the temperature, diminishes it by its secondary action. That which diminishes the pulse, finishes by accelerating it; the same remedy produces cerebral excitement and somnolence, diarrhœa and constipation, pain and anesthesia. The symptoms which first appear have received the name of primitive symptoms, the others that of secondary symptoms. Let us add that a sort of alternation of these opposing systems is often produced; the secondary succeeding the primitive, which reappear again after the secondary. Experiment has shown that the dose employed of the medicine has a considerable influence on the production of these alternate effects of the medicine. Thus, with very strong doses the primitive symptoms are almost entirely suppressed, and the secondary symptoms directly produced. For example, large doses of *Aconite* cause collapse with coldness, without first raising the temperature; they produce anæsthesia

without having developed pain; the purgatives in large doses purge without having caused a preliminary constipation, etc., etc.

Very small doses, on the contrary, produce the *primitive symptoms*. Thus, *Aconite* and *Rhubarb*, in small doses, cause: the first, elevation of temperature; the second, constipation, etc., etc.

In the healthy man, then, all medicine presents us two opposing actions, and either of these actions can be produced, almost at will, by the dose administered, Is it not evident, then, that if we wish to apply the law of similitude, we should, in the choice of doses, conform to these facts, and administer ponderable doses, or what approaches them, when we have to combat a symptom that resembles the secondary action of the medicine, and, on the contrary, prescribe infinitesimal doses when we have before us a symptom resembling its primitive action?

For example, *Rhubarb* in small doses produces constipation in a healthy man, and in strong doses it produces diarrhœa. To follow the law of similia, then, we must administer infinitesimal doses of *Rhubarb* to cure constipation, and the low dilutions, or even the tincture, to cure diarrhœa. The same rule applies to all remedies which, in small doses, produce constipation, and, in large doses, diarrhœa; that is to say, that class known under the name of purgatives.

Thus, as *Digitalis* in poisonous doses produces asystolia, so to cure asystolia we must give *Digitalis* in doses approaching the poisonous.

Thus, poisonous doses of *Peruvian bark* produce those pernicious fits of ague, with syncope, which we find in the Pathogenesis of Hahnemann, and it is *Sulphate of quinine* in almost poisonous doses (1 to 2 grammes) which cures the pernicious fevers.

Thus, *Mercury*, in large doses, given for a length of time to a healthy man, produces ulcerations and a cachectic condition analogous to syphilis, and ponderable doses of *Mercury cure* syphilis.

Thus, *Croton oil*, *Rhubarb*, *Bismuth*, *Veratrum*, and *Arsenic*, which in strong doses cause diarrhœa, cure it better in low dilutions than in high potencies. Thus, *Tobacco*, which in large doses produces vertigo, with vomiting, in the healthy man, in low potency cures the similar state called *vertigo a stomacho laso* best in low dilution.

Thus, the habitual use of natural water containing iron produces a state of anemia comparable to chlorosis, and to combat chlorosis it is necessary to take iron in ponderable doses.

To recapitulate, in order to combat in the invalid symptoms analogous to those produced in the healthy man by strong and even poisonous doses, it is necessary to choose strong doses rather than infinitesimal ones. On the other hand we find, for instance, that *Silicea* produces, in dynamised doses, engorgements and pains in the glands of the neck, ulcerations of the throat, and pain in pre-existing ulcers (Hahnemann); therefore, to cure these symptoms in a patient we should choose *Silicea* in infinitesimal doses.

It was from high potencies that Hahnemann obtained the greater part of the symptoms of *Sulphur*, and the generality of homœopaths counsel the use of the twelfth and thirtieth potency of this remedy in the treatment of diseases. The same reflections apply to *Lycopodium*, *Sepia*, and many other remedies. Nevertheless, one great difficulty is that the pathogeneses are made in such a manner that we very often ignore the doses employed and the distinction of the primitive and secondary effects. This is why I demand a reform in our materia medica.

In allopathy an inverse rule is followed. Thus the secondary actions of medicines are applied to the cure of the primitive symptoms, and reciprocally, the primitive actions to the cure of secondary symptoms.

For example, *Rhubarb* in large doses, secondary action, against constipation, which is a primitive effect of *Rhubarb; Aconite* in strong dose, secondary action, against febrile action, which is a primitive effect of *Aconite; Digitalis* in large dose, secondary action, against the acceleration of the pulse, primitive effect. On the other hand, when the allopaths give *Sulphate of quinine*, *Mercury*, *Iron*, and *Opium* in large doses to relieve intermittent fever, syphilis, chlorosis, and diarrhœa, they act on homœopathic principles, for they direct against symptoms analogous to the secondary action of the medicines; doses capable of producing these secondary effects. But if the allopaths often use homœopathy without knowing it, it is only just to add that homœopaths who prescribe forty and fifty drops of mother tincture of *Aconite* in cases of fever, unwittingly make use of allopathy, for they apply the secondary action of the *Aconite*, lowering of temperature, against the heat of fever: *contraria contrariis curantur*.

To sum up, we believe:

1st. That the question of doses, in homœopathy, should be decided by the knowledge of the primitive and secondary actions of medicines;

2d. That the primitive and secondary actions depend upon the dose employed;

3d. That all medicines produce alternately, in a healthy man, opposite effects, at once homœopathic and allopathic; and the same in morbid conditions.

4th. That, to conform to the law of similars, it is necessary to employ a dose which will produce the primitive effects of the medicine, when the morbid condition is analogous to these primitive effects. When, on the contrary, the morbid condition is analogous to the secondary effects of the medicine, it is necessary to prescribe a dose which would produce these secondary effects;

5th. That infinitesimal doses are most proper to reproduce primitive effects, and low dilutions, or even ponderable doses, are necessary to rapidly produce secondary action.

REPORTS OF SOCIETIES, ETC.

STATE SOCIETY.

The semi-annual meeting was held at Rochester on September 9th and 10th, the President, Dr. A. S. Couch in the chair.

The meeting was large, enthusiastic, and harmonious.

After a few well-chosen remarks by the President, in which he congratulated the society upon its flourishing condition, the regular order of business was proceeded with.

From the bureau of vaccination, Dr. W. B. Kenyon, of Buffalo, chairman, a paper was read on the question of "Enacting a United States Law Making Vaccination Compulsory," by Dr. N. Osborne. In this paper the speaker held that as Homœopathists were the leaders of vaccination, it would be advisable that they make an effort to get Congress to pass a law making it compulsory. He thought it was as highly important to prevent the spread of small pox as to prevent yellow fever. The examples of small pox in the cities of Buffalo and New York in years gone by were cited to show what might occur elsewhere. The paper was adopted, as well as another, on "The Superiority of Cow-Pox over Humanized Virus."

Dr. N. E. Paine read a paper on "Ventilation of Soil and Waste Pipes and Under Drains," by Dr. H. M. Paine. He said that not only the houses of the poor, but costly houses were frequently badly drained and ventilated. He said that cases of diphtheria and typhoid fever were traceable in many cases to drainage into cesspools, and combatted a common notion that sewage gases are not detrimental to health.

Dr. J. W. Dowling spoke of the susceptibility of some members of a family to malarial poison, while

others escaped, and instanced his own, he and his son being very subject to poison, while others of his family escaped. He and other physicians in New York had made extended inquiry among laborers who work in sewers, and found no case occurring from that cause. He did not think the disease arose from the gas unless there was a susceptibility. People who were under the influence of malarial poison often thought that they were sick from over work, smoking, eating too much, loss of sleep, etc.

In the department of otology, Dr. William P. Fowler, of Rochester, chairman, presented a report on "Sixty-three cases of Inspissated Cerumen." In this paper he said it was an error of the laity that nature needed assistance to dispose of the cerumen of the ear. There were constant interferences with mechanism which brought on serious complications. Nature disposes of the secretion itself, and no assistance is needed, unless other diseases are present He thought the use of ear-spoons, syringes, etc., were relics of barbarism. Nothing more than a napkin over the finger-tip should be used when it is necessary to remove a large secretion. Other papers in the otology department were "The Value of Electricity in Diseases of the Ear," by Dr. H. C. Houghton, and "Acute Purulent Inflammation of the Middle Ear," by Dr. F. Parke Lewis, of Buffalo. In the former paper, the author stated that he had obtained the best results from Galvanism. Dr. Lewis stated, in reply to this, that he had experimented two years with galvanism, but had not obtained the brilliant results mentioned. In chronic catarrh of the middle ear, he had found it to fail entirely.

The meeting adjourned to spend the afternoon in the enjoyment of the excursion to Irondequoit Bay.

Dr C. T. Liebold's paper treated upon the use of cotton in diseases of the ear and nasal passages.

MYOPIA IN OUR PUBLIC SCHOOLS.

Examination of the eyes of 1,013 *pupils, with Report of the Refractive conditions Found.*

BY W. P. FOWLER, M. D., ROCHESTER.

So much has been said and written concerning the presence of myopia among school children, that, with the exception of bare statistics, I can hope to offer nothing new. The subject is of such importance, however, that it should be constantly in the minds of physicians, and by them impressed upon parents, teachers, and others, until by enforcement of certain rules, the percentage of near-sighted cases is reduced.

Before giving the result of my examination made in Rochester schools, it will perhaps be well to consider briefly the refractive conditions to which the human eye is subject.

When the normally refractive emmetropic eye is at rest *i.e.*, adjusted for distance, parallel rays of light entering it are brought to a focus upon the retina, and the object from which they emanate is clearly and distinctly seen.

If the axis of the eye is too short, or the refractive power too low, parallel rays are brought to a focus *behind* the retina, or, more correctly speaking, are not focused at all, but fall upon the retina in circles of diffusion. It is only by an effort of the accommodation, or the use of convex lenses, that vision can be made distinct. This condition is known as *hypermetropia.*

Astigmatism, or irregular refraction of the eye, is occasionally met with.

Myopia, or near-sightedness, is that condition in which parallel rays are united in front of the retina, in consequence of the optic axis being too long, or exceptionally, the refractive power being too high. The increase in the antero-posterior diameter of the eyeball is due to inflammatory changes, with thinning and bulging of the ocular tunics near the entrance of the optic nerve. At this point the choroid becomes atrophied, and, on examining the eye with the ophthalmoscope, the white sclerotic is plainly visible. In high degrees of myopia the retina is affected, and no glasses will render vision normal. If short-sightedness progresses, it may terminate in glaucoma, choroidal hæmorrhages, detachment of the retina, blindness. The popular idea that near-sighted eyes are strong, because in old age glasses can sometimes be dispensed with, is one calculated to do much harm by leading people to regard myopia of little importance. A near-sighted eye is a diseased eye, and it should receive as much care as any other ailing organ of the body.

Short-sightedness is sometimes congenital, and often hereditary. Not unfrequently it can be traced back through several generations. I believe, however, that it is more frequently acquired. Of 1,004 near-sighted children examined by Dr. Cohn in German schools, only twenty-eight had myopic parents. Other statistics give about the same result. A predisposition to bulging of the globe is probably present in cases that are acquired, but the exciting causes of near-sightedness are necessary for its development.

The disease very rarely originates after the twentieth year, and seldom before the fifth, thus leaving the period of school life for its appearance. This fact would suggest the idea that study and confinement in the school room had some influence in causing it. Statistics prove this to be the case. The illiterate are rarely myopic, while in one of the colleges of Oxford 32 in 127 students are short-sighted. Of 410 students examined in the University of Breslau nearly two-thirds were myopic. A few figures will also show that near-sightedness increases with the advancing years of school life. Among 2,265 eyes examined by Dr. Loring in the public schools of New York the percentage of myopic cases among pupils under seven years of age was 35, and twenty-six in those between twenty and twenty-one. Dr. Lewis, of Buffalo, found between the ages of seven and ten, 13 per cent., and from sixteen to eighteen, 22.36 per cent. In my examination made in the schools of Rochester the ratio was 5.49 for those between five and nine years of age, and 19.56 for those above fifteen.

But what are the causes of myopia met with in school life? I believe them to be: 1. The early age at which children are sent to school; 2. Long study hours; 3. Poor light; 4. Unsuitable seats and desks; 5. Imperfect ventilation.

The early age at which children are sent to school is without doubt a potent exciting cause of near-sightedness. The tissues being less resisting than in after years, distention of the sclera at the posterior portion of the globe is readily produced. As Dr. Angell has said, the eye during early childhood is a "growing organ, easily moulded, and its future, like other parts of the body, is to be very much what it is made by training, use, and abuse." Children are required to be five years old before entering the public schools. It would be much better if they were not admitted until they reached their eighth or even ninth year. There are little ones in our schools under the prescribed age of five years, but this is not the fault of teachers. Said the principal of one of the schools, when I called his attention to the fact: "I agree with you that some of the children in the lowest grade are not five years of age, but when a mother tells me her child is five years old or more, I cannot question her truthfulness. On one occasion, when I expressed a doubt that a boy was old enough to enter school, his mother replied: 'Perhaps I know as much about the age of my child as you do.'" Thus parents, not teachers, are responsible for the admission of these little ones to our school-rooms.

The influence of long study hours in the production of myopia, by all who have given the subject atten-

tion, is considered very important. When, as in study, the eyes are almost constantly kept in a condition of convergence and accommodational effort, the ocular tension is increased and short sightedness encouraged. Especially is this true if the tissues are rendered lax by long confinement in the school-room, want of exercise in the open air, and disregard of other hygienic requirements. Not only in school do pupils study. Many carry their books home, and pore over them until late at night. Besides this, there is a great deal of novel-reading among school children; hours devoted to cheap editions of popular novels printed in small type on poor paper.

The pernicious effects of our present high-pressure system of education appear to be greater upon girls than upon boys. In the schools of Rochester I found that while only 7.67 per cent. of the boys were near-sighted, 12.80 of the girls were affected.

Imperfect lighting of school-rooms tends to produce myopia. The light should enter from above or from behind and at one side, so as to fall upon the page and not upon the eye. The newer school buildings in Rochester, as far as I have seen, are well lighted. In one of the old ones, however, I found that worst of all arrangements, the pupils facing the windows. In this position the full glare of the light falls upon the retina, which becomes fatigued. The book is meanwhile in shadow. Not only myopia, but other and equally grave affections of the eye are liable to be caused by studying day after day in a room thus lighted. In two buildings I found the light insufficient on account of the windows being too small.

Unsuitable seats and desks. The principal fault in the seats is that the backs slant too much. If the pupil sits so that his back is supported, the book on the desk is too far from his eyes, and to sit erect supported is so fatiguing that he soon bends forward and leans on the desk. This position brings the page too near the eye, the body being bent forward causes an increased flow of blood to the head and eyes, the action of the respiratory organs is interfered with, and the health, not only of the eyes, but of the general system, is endangered.

The height of the desk should vary with the size of the child. In the several grades the desks differ in height, but in no room did I see them adapted to the varying size of the pupils. Yet this is a defect easily remedied, by constructing the desks with adjustable tops. If this were done, much of the stooping that is so injurious would be avoided.

Poor ventilation undoubtedly plays an important part in the production of near-sightedness. Some of the school-rooms that I entered seemed to be well ventilated, but in many the air was close and oppressive. When pupils sit for hours in a room filled with impure air they become languid and drowsy. They do not sit erect, but study with the face close to the book. The general health soon becomes impaired in consequence of inhaling the poisonous carbonic acid gas, the tissues lose their natural firmness, and myopia readily follows.

Most of the text-books are printed in good clear type, but in almost every instance upon white paper. Tinted would be far better.

It has been said that Germany is the nearest-sighted nation in the world; but, as will be seen by the proceedings of the American Social Science Association for 1875, myopia appears to be about as prevalent among the children in the United States as in Germany. Many observers in this country have found that children of German parentage show the greatest percentage of near-sightedness. Others, however, have obtained different results. Dr. Lieboid, of New York, found a less percentage of myopes among German children than any other nationality. In Rochester the rate among Germans is 10.46, among Americans 10.38, among English 9.90, and for the Irish 8.74. This shows very little difference between Germans and Americans in this city. In all probability the percentage of myopia is to-day nearly as great in the United States as it is in Germany. A few more years of the "examining" process to which school children are here subjected, and to the United States, not Germany, will belong the poor notoriety of being the nearest-sighted nation on the globe. The people of our country should bear in mind that though their push and ceaseless activity will accomplish wonders in certain directions, they will often, if applied to the education of their children, not only thwart the end they wish to attain, but lead to disease and suffering.

Dr. F. Parke Lewis said the disease was rapidly increasing among the pupils of the Buffalo schools, and one out of four pupils graduating at the schools were myopic. Dr. Lewis read a paper on "The Homœopathic Therapeutics of Trachoma." The paper gave the plan of treatment in several cases.

Dr. A. R. Wright, of Buffalo, chairman of the Bureau of Climatology, reported four papers from his department. One, upon "The Etiology of Diphtheria in Geneva," by Dr. Covert of that place. It treated of the causes of the epidemics which made such terrible ravages in Geneva during the past year, as they could be gleaned from the evidences coming to light during the progress of the disease. Dr. Covert referred particularly to the bad drainage of the village. There were 448 cases in the place, 308 of them being in houses for which there was no drainage.

Dr. Burdick, of New York, asked if there were any changes in the conditions of soil, etc., previous to the time of the epidemic.

Dr. Covert said he did not take much stock in the filth and water reason. The village had been in better condition during the past two years than ever before.

Dr Wright said he thought the sluice or small stream running through the village might be a source of danger to the health of the people. In the dry weather, the evaporations of draining into this stream were very unpleasant, and must be very unhealthful.

Dr. Covert said the creek was cleaned thoroughly by the Board of Health, and kept in good condition. The epidemic broke out more than a mile away from the creek, and spread all through the region

Dr. Wright next presented a paper on "Treatment of Malarial Fever," by Dr. Bayliss, of Long Island, and also a report by himself on the water supply. He presented a resolution to the effect that a committee be appointed to investigate and report upon the sanitary questions pertaining to the water supply. The committee was to consist of one physician from each of the principal cities of the state. Adopted.

Anna C. Howland, M.D., of Poughkeepsie, chairman of the Bureau of Gynæcology, reported several papers —one from Dr. Egbert Guernsey on "Abuses of Uterine Surgery," one from Dr. Moffat, of Brooklyn, upon "A New Hypogastric Bandage," another from the same author on "A case of Extreme Retroversion."

MECHANICAL APPLICATION.—There is an almost daily need in every physician's office of various forms of mechanical instruments. Pomeroy's trusses are so well known and so thoroughly appreciated by the profession as to need no commendation by us, but our medical friends will be glad to know that they can find at Pomeroy & Co.'s a full stock of the best kind of all the various goods, such as elastic stockings, knee caps, splints, crutches, etc., of the most approved pattern and best make.

N. Y. OPHTHALMIC HOSPITAL.—Report for the month ending August 31, 1879: Number of prescriptions, 2,923; new patients, 393; patients resident, 27; average daily attendance, 113; largest daily attendance, 160.

J. H. BUFFUM, M. D., *Resident Surgeon.*